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Administration of certain inventions and patents...

Washington, D.C.

1919

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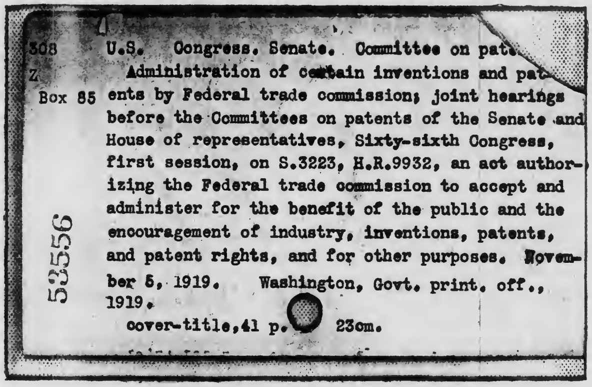

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Box 85 ents by Federal trade commission; joint hearings before the Committees on patents of the Senate and House of representatives, Sixty-sixth Congress, first session, on S.3223, H.R.9932, an act authorizing the Federal trade commission to accept and administer for the benefit of the public and the encouragement of industry, inventions, patents, and patent rights, and for other purposes. November 5, 1919. Washington, Govt. print. off., 1919.
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ADMINISTRATION OF CERTAIN INVENTIONS AND PATENTS BY FEDERAL TRADE COMMISSION

JOINT HEARINGS

BEFORE THE

COMMITTEES ON PATENTS OF THE SENATE AND HOUSE OF REPRESENTATIVES

SIXTY-SIXTH CONGRESS
FIRST SESSION

ON

S. 3223
H. R. 9932

AN ACT AUTHORIZING THE FEDERAL TRADE COMMISSION TO ACCEPT AND ADMINISTER FOR THE BENEFIT OF THE PUBLIC AND THE ENCOURAGEMENT OF INDUSTRY, INVENTIONS, PATENTS, AND PATENT RIGHTS, AND FOR OTHER PURPOSES

NOVEMBER 5, 1919

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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ADMINISTRATION OF CERTAIN INVENTIONS AND PATENTS BY FEDERAL TRADE COMMISSION.

COMMITTEES ON PATENTS,
UNITED STATES SENATE,
HOUSE OF REPRESENTATIVES,
Wednesday, November 5, 1919.

The committees met in joint session in the room of the Committee on Patents of the House of Representatives at 10.30 o'clock a. m., Hon. John I. Nolan (chairman) presiding.

The committees had under consideration the identical bills S. 3223 and H. R. 9932, as follows:

[S. 3223 and H. R. 9932, Sixty-sixth Congress, first session.]

A BILL Authorizing the Federal Trade Commission to accept and administer for the benefit of the public and the encouragement of industry, inventions, patents, and patent rights, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Federal Trade Commission be, and hereby is, authorized and empowered to accept assignment of, or license under, to develop, to issue or refuse to issue licenses under, to encourage the industrial use and application of, and otherwise to administer, on behalf of the United States, under such regulations and in such manner as the President shall prescribe, inventions, patents, and patent rights which said commission deems it to the advantage of the public to be so accepted, as these may from time to time be tendered it by employees of the various departments or other establishments of the Government, or by other individuals or agencies; and to cooperate, as necessity may arise, with scientific or other agencies of the Government in the discharge of the duties herein set out.

SEC. 2. That the Federal Trade Commission be, and is hereby, authorized and empowered to collect fees and royalties for licensing said inventions, patents, and patent rights in such amounts and in such manner as the President shall direct, and shall deposit the same with the Treasurer of the United States; and of the total amount of such fees and royalties so deposited a certain per centum, to be determined by the President, shall be reserved, set aside, and appropriated as a special fund to be disbursed as directed by the President to remunerate inventors for such of their inventions, patents, and patent rights contemplated by this act as may prove meritorious and of public benefit.

SEC. 3. That the appropriations of any governmental department, bureau, office, or establishment, are hereby made available for the payment of fees charged by the Patent Office for and in connection with the granting of patents contemplated by this act.

Present: Members of the House Patents Committee; also Senators Knox, Norris, and Brandegee, of the Senate Patents Committee, and various parties interested.

Senator NORRIS. The Senate meets at 11 o'clock this morning and there are one or two important matters before it, so we will not be able to stay with you very long.

The CHAIRMAN. Before Senator Knox, Senator Brandegee, and Senator Norris go, I would like to make some reference to this letter. This is a letter I received from the Acting Director of the Bureau of Standards, Dr. E. B. Rosa, under date of August 22, 1919, addressed to me as chairman of the Committee on Patents of the House of Representatives. The letter reads:

On June 17, 1919, I addressed a letter to you regarding the bill H. R. 14944, Sixty-fifth Congress, to which I received your reply dated June 18, 1919. My letter, referred to above, contained the following paragraph:

"1. A patent, No. 1303729, has been issued to Mr. James Harris Rogers on a wireless signaling system which seems to be practically identical with a method for communication between submarines which has been developed by the Bureau of Standards in cooperation with the Navy Department."

2. I am now informed that a resolution has been offered in the Senate carrying the thanks of Congress and appropriating $1,000 for a gold medal to be presented to Mr. Rogers.

3. Mr. Rogers had no part in the work of the Bureau of Standards referred to in the letter from which quotation is made above, and which, we are told by Navy officials, has made efficient submarine radio transmission possible.

4. In view of these facts we feel that it is proper to suggest that some investigation be made of the merits of the case before the adoption of the resolution which has recently been introduced.

5. We shall be glad to assist in such an investigation in every way possible.

Respectfully,

E. B. Rosa, *Acting Director.*

I thought you might want to make some comment on that, Dr. Cottrell. Do you know anything about that case?

Dr. Cottrell. It is something I am entirely unfamiliar with.

The Chairman. It appears to bear directly on the bill, and there seems to be confusion as to who really did develop that very important invention, so I will have the quotations from the letter incorporated in the record.

I have also a letter here from the former Commissioner of Patents, Mr. Ewing, which I would like to have incorporated in the record. This is addressed to me as chairman of the Patents Committee, under date of November 1, 1919. Mr. Ewing says:

New York, *November 1, 1919.*

Hon. John I. Nolan,
House of Representatives, Washington, D. C.

Dear Sir: I am informed that House bill 9932, authorizing the Federal Trade Commission to accept assignment of inventions and patent rights of Government employees and other persons, will come before your committee for public hearing to be held on Wednesday, the 5th of November. I am unable to be in Washington on that date, and am therefore writing to say that I heartily approve of the bill.

When a bill in identical language was before the Committee last year I appeared and made a statement, found in the printed report of the hearings, dated January 27, 1919, page 36. As on the other occasion, I suggest that the bill be amended by eliminating the reference to the President where it says in the first section that the bill should be administered "under such regulations and in such manner as the President shall prescribe," and in the second paragraph where it says that the commission shall "collect fees and royalties for licensing said inventions, patents, and patent rights in such amounts and such manner as the President shall direct."

I think that in both of these respects the power should be exercised by the commission and not by the President. The President would act only on recommendation of the commission in any event, and the disadvantage of making the action nominally the action of the President is that it would make it more difficult to control the action of the commission through the courts in case the commission were to exceed its powers or abuse the discretion reposed in it.

The bill also provides that "of the total amount of such fees and royalties so deposited a certain per centum, to be determined by the President, shall be reserved, set aside, and appropriated as a special fund, to be disbursed as directed by the President to remunerate inventors."

I think that this power should be exercised by the President as provided in the bill, because an award coming from the President would confer greater distinction than if it came from the commission.

I wish to suggest a further amendment in the first clause of the bill: After the word "license" in the clause "assignment of or license under," I would insert the words "or other rights or powers."

If the bill is passed and the Commission begins to work under it, I believe that in the end the arrangement which it will find most workable is to have the patentee surrender to the Commission not the title to the patent or a license under it but merely the power to grant licenses. The exclusive right to grant licenses is sufficient for the purposes of the bill, and the language should be broad enough to permit the Commission to accept it while leaving the title to the patent in the patentee.

I entertain serious doubt as to the status of a patent which the Government has purchased or acquired outright. It seems to me that if the Government holds a monopoly it can only hold it as a trustee for the whole people, and that to attempt to enforce the patent against alleged infringers while permitting other citizens to enjoy it would probably fail in law, and almost certainly fail in practice.

These suggestions which I have made do not, however, to my mind go to the substance of the bill, and if they do not meet with the approval of its proponents, or of the Committee, I am in favor of the bill as drawn. I think in fact it would mark the beginning of an extremely interesting experiment under which inventors who, like Dr. Cottrell, desire to give the public the benefit of their labors, may do so with a fair prospect that the necessary capital for development and introduction of inventions will be forthcoming.

As the law stands to-day an inventor by dedicating his invention to the public may give the public his patent but can hardly hope that the invention will go on the market. For no one is encouraged to take the financial risk involved, with the certainty that if he makes a success others who have taken no such risk will be free to enter as rivals and competitors.

Under the proposed act the Commission can make such provisions as will hold out hope of return adequate to the financial risk while at the same time the public interest may be safeguarded.

Respectfully,

Thomas Ewing.

Department of Agriculture,
Bureau of Chemistry,
Washington, D. C., November 11, 1919.

Hon. John I. Nolan,
House of Representatives.

Dear Sir: I am informed that you desire me to comment upon a letter addressed to you by the Hon. Thomas Ewing, of New York, a former Commissioner of Patents, with reference to H. R. 9932.

Mr. Ewing recommends that in the first section of this bill the words "under such regulations and in such manner as the President shall prescribe" be eliminated. I see no special objection to the elimination of this language.

Mr. Ewing further recommends that the language "collect fees and royalties for licensing said inventions, patents, and patent rights in such amounts and such manner as the President shall direct" be modified so that this power be exercised by the commission and not by the President. I see no objection to amending the bill in the manner suggested.

Mr. Ewing also recommends that the bill be amended so that there be inserted in the first clause of the bill, after the word "license" in the clause "Assignment of or license under," the words "or other rights or powers." It seems to me that the suggestion constitutes an improvement.

Respectfully,

C. L. Alsberg, *Chief.*

Mr. Davis of Tennessee. Mr. Chairman, in connection with that letter, suppose you ask the gentlemen interested in the bill that has been introduced what they think about those proposed amendments.

The CHAIRMAN. I was going to suggest that they give us their opinions on them, but I thought they would like to study them over.

Dr. COTTRELL. I have looked them over. I think, unquestionably, the last amendment proposed is a decided improvement and should be incorporated. While I should not say it broadens the spirit of the bill, it gives a greater freedom for doing just what we hope to do under it. And inasmuch as this whole matter has got to be worked out experimentally, freedom of discretion is decidedly necessary.

The CHAIRMAN. Just as soon as we get the transcript of the testimony, I will be glad to have copies of the letter made and furnish them to the Commissioner of Patents and to Dr. Cottrell and others interested, so that they may give us their opinions on the suggested amendments.

Mr. DAVIS of Tennessee. Give their opinion in writing.

Commissioner NEWTON. I would be glad to do so. I do not see any objection to them and I think they are good suggestions, offhand; but I would like to think the matter over.

The CHAIRMAN. Yes, because it is pretty hard to grasp the entire significance of amendments as they are read here.

Dr. COTTRELL. In regard to the first suggestion, I am neutral. Whether the discretion goes direct to the Federal Trade Commission or nominally to the President is of no particular concern.

STATEMENT OF DR. F. G. COTTRELL, ASSISTANT DIRECTOR OF THE BUREAU OF MINES.

Dr. COTTRELL. This is essentially the same bill that was introduced in both Houses last year, upon which hearings were held and printed and which are available at this time. And I think there is really little or nothing to add to those hearings as a matter of record. The bill, after being reported favorably by the patent committees of both Houses, was among various others which failed to come up for definite action in the Senate or House, on account of the congestion in the legislation at the close of the session. And as far as the making of a printed record at this time is concerned, I think the former record can be utilized almost entirely as a means to that end.

The bill is intended to facilitate getting patentable ideas and inventions of a particular nature that from time to time are now being made in the various Government departments to the public in useful form. So many developments of that kind at present get no further than academic discussion or possibly publication in some journal. They do not reach the ultimate consumer in a useful form, because they do not connect with the avenues of trade and manufacture.

That comes very largely from the fact that what is everybody's business is nobody's business. If you simply publish a description of a new process or a new invention, it is not apt to be developed any further into industrial use unless it fits very directly into the line of work that somebody is carrying on, and can be taken up and applied in his particular field. People hesitate to spend much money in developing an invention which has simply been published broadcast without any restrictions. They do not know how many others may be doing exactly the same thing. They realize that, if they simply take the description of the invention as it stands and spend money on its industrial development, such, for instance, as building a plant and instituting an advertising campaign to carry that development forward to the public, about the time they have gotten a market established and production under way somebody else will come in and reap the benefit of the energy and capital that they have expended, as an asset in production, without an equivalent burden upon themselves. A great many meritorious things fail of reaching the public just on that account.

Now, if, on the other hand, there were a definite channel through which inventions could be patented and the patents licensed to different producers in the same way that other patents are handled, you would thus carry them into the main stream of business and get the results to the public. In other words, it is simply carrying out the basic idea of the patent system. The patent system is becoming of importance not merely to protect the inventor, but to encourage and stimulate industry to take up individual inventions; and something of that kind is needed.

Senator BRANDEGEE. This bill does not touch the question, does it, as to whether the inventor can take out a patent for himself if he is in any of the departments? It does not pretend to remedy the abuses that you recite in one of the documents I have been reading here in the former hearings as to different classes of rights of a discoverer, does it?

Dr. COTTRELL. No; it does not do that in a mandatory way. It is purely an enabling act. But it makes it possible for the departments individually——

Senator BRANDEGEE. This bill does, by authorizing the Federal Trade Commission to administer the patent?

Dr. COTTRELL. It opens up a definite method.

Senator BRANDEGEE. How does it do it? I may be dense about it, but in this bill, as I read it, I do not see how they would be authorized to make any regualtions, that would have the force of law, to harmonize or unify the right of the different inventors in the different departments.

Dr. COTTRELL. I would not say that it provides authority with the force of law to do that. I think that is a matter that should come somewhat later. We look at this largely as an experimental measure, as I said before. The difficulty now is, the departments' hands are tied; they are between the horns of a dilemma.

Senator BRANDEGEE. What I mean is this: As I read this bill hastily and for the first time, it simply authorizes the Federal Trade Commission to accept assignments of patents and to administer them under rules and regulations to be prescribed by the President, etc.

Dr. COTTRELL. Exactly.

Senator BRANDEGEE. Now, if that is all, how could it in any way make uniform the different classes of rights to patents and determine the question as to whether the inventor, if he is a Government employee, could take out a patent in his own name and for his own use?

Dr. COTTRELL. I think that will adjust itself by agreement between the different departments if they have an opportunity to do something of this kind. The difficulty heretofore has been, there has been no place where they could assign these rights.

Senator Brandegee. More fundamental than that; how can agreements between the departments determine the legal rights of the inventors?

Dr. Cottrell. They can not. That would have to be eventually a matter for congressional enactment. But as a forerunner to that, I think the work can perhaps at present best be done by Executive order, which has not, naturally, the force of law to compel those things to be done.

Senator Brandegee. I understand. Of course the abuses of which you complain ought to be controlled by law?

Dr. Cottrell. Eventually, yes.

Senator Brandegee. And not left to advice and guidance.

Senator Norris. Under the present law, Doctor, if some man in the Bureau of Mines invents something that is patentable, he can take out a patent, can he not?

Dr. Cottrell. Yes.

Senator Norris. This bill would enable him to assign that to the Federal Trade Commission?

Dr. Cottrell. Yes.

Senator Norris. He could do that or not, just as he saw fit?

Dr. Cottrell. Yes.

Senator Norris. Under this bill?

Dr. Cottrell. Yes; this bill does not affect that right.

Senator Norris. I suppose if he had patented something that he thought was coming into general use he would not avail himself of this; he could get a patent and go on in his own way, and not avail himself of this, could he not?

Dr. Cottrell. Theoretically, yes.

Senator Norris. What I am getting at is the practical application of it. If I understand it (and if I am wrong I wish you would enlighten me), if he invents something he thinks probably will not come into general use, but still is very important in the activities, we will say, of different Government departments and perhaps in commercial ventures also, and if he does not get it patented, as you say, everybody will hesitate to develop it, because they will fear somebody else will take advantage of the preliminary work that they had to perform and they will thus lose money by it?

Dr. Cottrell. Yes.

Senator Norris. That would not occur in something that was going to come into general use, that they could manufacture just like any other patented article. The object here, in this kind of inventions, is to get the patents assigned to the Federal Trade Commission and then let them license somebody to manufacture the article, or whatever the patent may be, and then prohibit anybody else from manufacturing it?

Dr. Cottrell. Yes.

Senator Norris. In order to get some concern or man interested in a financial way, so that they could be protected if they do go into it?

Dr. Cottrell. The idea is to give sufficient protection to effect the development of the invention by limiting the licensing to what would insure a fair return for the capital expended.

Senator Norris. Are there a good many of such inventions?

Dr. Cottrell. Yes; and there would be many more if a development of this kind were made possible. We have, in the Bureau of Mines, a good illustration of just the thing you have mentioned. This is the development of the Gillett electric furnace, which was designed primarily for saving certain wastes in the industry of melting brass and other alloys, when we were making particular efforts to conserve metals during the war. That was worked out by members of the Bureau of Mines, and licenses under the patent covering it have been issued through the Secretary of the Interior to do just this thing we are asking definite authority for the Federal Trade Commission to do.

Senator Norris. You fear the Secretary of the Interior has not any legal authority to do that, and if anybody wanted to they could disregard the license entirely?

Dr. Cottrell. Yes.

Senator Norris. That is what you want to prevent?

Dr. Cottrell. That is what we want to prevent. Up to the present time these matters have not been of sufficient magnitude for anybody to care to get into a conflict over them, which would mean the challenging, more or less, of the assumed authority we have exercised. It has been moral suasion that has carried it through. But the situation is becoming more and more unsatisfactory, and it is advisable to have definite authority for a proper procedure. And, furthermore, it would be well to have this centralized at some point in the Government system where all of the scientific bureaus could use it in common, because the administration of patents is a special subject in itself and none of us in the technical bureaus are sufficiently familiar with, or, as a matter of fact, interested in its details.

Senator Norris. In case you had this bill enacted into law, how would men, who made an invention, be protected? Would the Federal Trade Commission provide a sum of money to be paid to them?

Dr. Cottrell. The bill provides:

> And of the total amount of such fees and royalties so deposited—

That is, deposited in the Treasury by the Federal Trade Commission—

> a certain per centum, to be determined by the President, shall be reserved, set aside, and appropriated as a special fund to be disbursed as directed by the President to remunerate inventors for such of their inventions, patents, and patent rights contemplated by this act as may prove meritorious and of public benefit.

Senator Norris. Now, right on that point, do you not think the law ought to provide what percentage that should be rather than to leave it to any official of the Government?

Dr. Cottrell. I am afraid that is impracticable. We have been over that very carefully with people familiar with this subject, and the feeling was that much more fundamental justice would be done by such a procedure.

Senator Norris. The President, of course, no matter who he might be (and I am not referring to any particular President), can not have any personal knowledge about these inventions. He would have to follow somebody's advice?

Dr. Cottrell. It would undoubtedly be referred either to a special commission, or to a permanent body; either to the National Academy, or some one of its committees, or to some person or persons in whom the public would have confidence, for judgment on the merits of the case in order to determine the recompense. One difficulty of putting it on a percentage basis is that it is found that patents, apparently in fairly different lines, begin to converge and become almost inseparable in the licensing, and the license is often of a group of patents instead of individual patents. And for business purposes this has to be.

Senator NORRIS. Why would it not be better to allow the Federal Trade Commission to decide how this money should be divided? They would have some familiarity with it.

Dr. COTTRELL. Under this bill that would be entirely within the discretion of the President, and he might do that, and, if it worked well, continue it there.

Senator NORRIS. Why not fix it that way in the law? Would there be any objection to that?

Dr. COTTRELL. This is simply making it a little more flexible. It is the idea to leave it as flexible as possible.

Another point, which Mr. Ewing, the former Commissioner of Patents, rather emphasized in one of his letters on the subject, was that while he thought it might be very well to have the recompense come through the Federal Trade Commission direct, instead of through the President, as this bill contemplates, it might be more appreciated if it were left, nominally at least, as a presidential award. That is simply a matter of sentiment. It may have some force.

It is also a question whether the body carrying out the routine business administration of the patents would be in really as good a position to judge the fundamental value of them in the long run as some other more detached body. For this reason and others we find we can not make the recompense directly from the returns.

Let us take a medical patent from which the returns might be almost infinitesimal in actual cash value—some serum or medicine, the sales of which are quite small—and compare this with, for instance, some metallurgical patent which goes into tremendous money. The medical patent, while of minor importance commercially, might mean vastly more to the human race than the other. Now, if, in the determination of the compensation, a very broad view is taken and the assignment of the reward is made for real accomplishment, rather than the mere measure of the dollars and cents return on the patent, I think it will more nearly meet the true ideal of such an administration.

That was largely the fundamental idea back of the draft of this particular measure concerning this point.

Senator NORRIS. We have been in the habit for a long time of turning everything we do not decide definitely over to the President until he is burdened with a lot of things that everybody knows he can not pay any attention to himself, but has to have somebody tell him what to do and necessarily has to follow them. It seems to me the Commissioner of Patents might be a good man to determine that. Would he not know a good deal about it, and would he not have more knowledge than the President would have?

Dr. COTTRELL. That might be a solution of the problem. I think that would be an entirely acceptable idea to those of us who drew the bill. This bill, you will remember, was drawn last year and we rather followed the custom at that time of making these assignments pass directly through the Executive. In fact, this bill was drawn very closely on the lines of the trading-with-the-enemy act, in which provision was made for the administration of the enemy-owned patents. And it is taking practically the wording of that bill and adapting it as closely as possible to this, considering it a standard form that both Houses were already familiar with; and we preferred to at least initiate the bill in that form rather than seem to attempt to determine those details ourselves.

The CHAIRMAN. Mr. Ewing, in a letter I received from him recently, seemed to think that in the disbursement of this fund greater distinction would be conferred on the inventor if it was disbursed by the President instead of the Commissioner of Patents.

Senator KNOX. I think it is a better legislative practice, when a disbursement is a discretionary act, to vest it in the President. It would be the Commissioner of Patents in the end. It does not make any difference whether you put it in the bill or not, that is how the President would act, on the advice of the Commissioner of Patents.

Mr. WHEELER. He would take his recommendation?

Senator KNOX. Yes; the President can not do everything, of course, although theoretically, he has to. For instance, in theory he has to carry the mails as an executive act.

Dr. COTTRELL. I think such a fund, if it began to accumulate, would attract nation-wide attention and our national organizations, such as established engineering societies and others, would be very glad to help in advice and the formulation of the precedure to be adopted in awarding it, either by the President, or the National Academy, or the Commissioner of Patents. I think it would stimulate a great deal of healthy interest in such matters.

The CHAIRMAN. If you would like to take your statement that was presented to the Senate and House committees at the last session and incorporate it, with whatever other matter and further suggestions you might wish to make, you have that privilege if there is no objection appearing. Hearing none, you will have that privilege.

Who else would you like to have make a statement?

Dr. COTTRELL. Dr. Alsberg is as familiar with this measure as anybody.

STATEMENT OF DR. CARL L. ALSBERG, CHIEF OF THE BUREAU OF CHEMISTRY, DEPARTMENT OF AGRICULTURE.

Dr. ALSBERG. There is very little that I can add to Dr. Cottrell's statement.

The object of this bill is to get valuable inventions used which are not used now for lack of protection, and to devise some machinery by which the inventor, if he is a Government employee, may get something out of his invention, and, in consequence, to stimulate inventors in the Government employ.

Its further object is to permit altruistic persons not in the Government service, if they should see fit, to assign their inventions to a Government agency for development and administration.

I think the question of the desirability of stimulating the use of Government patents, many of which are not used now, has been fully covered by Dr. Cottrell. I might, perhaps, cite in that connection a specific case which occurred within the last few months in the official work of the Bureau of Chemistry. Congress some years ago made an appropriation to the Bureau of Chemistry to assist in stimulating the dye industry in the United States. As a by-product of the work which the bureau has done in that connection there was invented a process for making a substance known as phthalic anhydride, which is the basis of some very important medicaments, and also the basis of a whole series of dyes, which could not be produced in the United States because no one had provided a commercial method for making phthalic anyhdride.

The bureau, however, had this method patented and announced that it would cooperate with any manufacturer who desired to use the invention. Our only means of protecting those who wanted to go into it was to offer to them the assistance of the men who did the inventing and who, of course, would be more skillful in developing the process commercially than an outside party. Three such manufacturers asked for cooperation and two of them are now producing this material in commercial quantities, and the market price of the material is gradually coming down.

I have recently received a visit from an officer of one of these concerns. He wanted to know in what way the Government could assist him in protecting his company from the action of some of their employees who have resigned and organized a private corporation which is to manufacture this material. Now, of course, in resigning, they have the right, the patent being a public patent, to use the process; but the patent itself is of little value. This concern has probably spent $100,000, or perhaps more, in unsuccessful experiments to make the product commercial. They are successful now and are operating. Now, these men who have resigned have the inside information on the development of the processes—I mean of the development work which this company did. The department had to say to this concern, "We are very sorry, but under existing conditions we can not assist you in protecting your investment."

With reference to the fair treatment of Government employees, I, perhaps, can furnish some points of interest. The regulations, as you know, in the various departments are very different. I am told that in the War Department a man who invents something is not interfered with by the head of that department if he exploits it privately, provided the United States Government can use the patent—if it needs it for its own purposes. The Department of Agriculture has different regulations, and these regulations grew out of the severe criticism to which the department was subjected in the past for its failure to control its employees with reference to their inventions. You may recall what took place some 15 or 20 years ago with reference to patents that dealt with a discovery of methods of cultivating nitrifying bacteria that grow on the roots of alfalfa, clover, and other leguminous plants and that add to the fertility of the soil. A very unfortunate situation developed because the department had no method of controlling its employees who made such discoveries. As the result of that criticism in the past, the department has a regulation that requires its employees virtually to take out on their inventions what are known as public-service patents, but then the department forgets them. Now, these patents are rarely utilized, the inventor gets nothing out of them, and most of the time the public gets nothing out of them, because nobody has any protection.

As has been indicated here, a man can ignore the regulations of the department and under the law take out the patent in his own name; but if he does, he violates an order of the Secretary of Agriculture, and the result will be a request or a demand for his resignation. The man will then leave the department under conditions under which a man does not like to leave the Government service. Now, this bill would remedy that condition.

Senator **Norris**. If this bill were enacted into law, could not a man get out of the department after he had learned——

Dr. **Alsberg**. He could.

Senator **Norris**. And get a patent in his own name and go ahead?

Dr. **Alsberg**. He could do that; but I do not think it would happen very often. The incentive for him to get out would not be so great, because this bill provides the machinery by which he can get some financial reward. Usually a man values his service in the department, and it must be a pretty big temptation that will induce him to get out. That is the reason we are holding a great many of our men under present conditions on their old salaries. There is occasionally a man, perhaps, who would get out, but I do not think it would happen very often. Of course, if Congress desires to go further in this matter and to pass legislation which would specifically nail down the man's rights and the Government's rights, that would be desirable. We have not thought at this stage of making such a radical recommendation, because you will have to take into consideration that the conditions of employment in the different departments vary greatly.

An officer who is a graduate of West Point and an employee of the War Department is not employed for the purpose of making inventions. If he makes a valuable military invention, as a rule, it is something more than is required of him in the regular line of his duty and he therefore has a title to that invention. A scientist in the Department of Agriculture, however, is employed to do research work on Government time, and gets his salary from the Government and his equipment for the specific purpose of making inventions. There is a shade of difference in the equity of these two men, a very considerable difference, which you have to consider in anything you may care to do in this matter of determining the rights of the individuals. In the case of the dye-process invention made by those two men in the Department of Agriculture, the Government certainly has an equity in that invention because the chemists were hired to do that kind of work and the Government paid for the work. It has at least what is known in the industry as a shop right.

The third point that I want to make is with reference to the desirability of permitting the Federal Trade Commission to take over patents from the general public, inventions from people who are not in the Government service. My own thought in agreeing to that feature in the draft was mainly in connection with the medical profession. You gentlemen know, of course, that in this country—it is not true in all other countries, but it is true in this country and in England—the code of ethics, the professional code of ethics of the medical profession——

Senator Knox. If you will just excuse me, as I have to go, I only want to say that my conception of this thing lies in the last sentence of that report. (Referring to the report of the Committee on Patents of the last Congress, recommending passage of H. R. 14944, practically identical with this bill.) It can not hurt anything and it may help. It is remedial and I am in favor of it.

Dr. Alsberg. As you gentlemen all know, the code of the medical profession, the ethical code, prohibits an investigator in the medical science from patenting anything. The result is, his inventions are given to the public without any reward to himself. That is not so objectionable, because a man who enters the profession of medicine knows that is part of the conditions of his career; but it also removes these inventions from all control and makes it possible for every kind of quack and faker to utilize such inventions. If the Government provides the machinery by which medical inventions outside of the Government service can be patented and handled by the Government, and if any reward reaped is a matter of discretion on the part of the President, the Federal Trade Commission, the Commissioner of Patents, or whomever it may be that you see fit to intrust with that responsibility, it will take away the possibility of criticism in the case of a medical man who may patent a valuable invention under these circumstances, and it will stimulate invention in the medical field. It will also make it possible to exercise proper control of such inventions.

Let us take, for instance, such an invention as the cerebrospinal meningitis serum, which was not patented. It was made by the scientists of the Rockefeller Institute. If that had been turned over to the Government and the Federal Trade Commission had been assigned a patent for it by the man who made the invention, then the licenses which would have been issued under that patent might have been hedged about with such safeguards that the Government would have been certain the serum produced under that patent would be safe and reliable. As it is, the Government had to pass a special act, which is administered by the Public Health Service, in order to safeguard the public with reference to such sera. This bill would extend that safeguard possibly to such materials as are not covered by that serum act.

Those are the three points I wanted to contribute.

Mr. Davis of Tennessee. Have you studied the proposition of a compulsory licensing system as to all patents? In other words, let the title to all patents be held in some Government official and to a certain extent control the sale and use of them in that way, so as to prevent a great many abuses that arise both against the inventors and the public.

Dr. Alsberg. You mean patents in general?

Mr. Davis of Tennessee. Yes.

Dr. Alsberg. Whether private inventions or otherwise?

Mr. Davis of Tennessee. In other words, instead of issuing a patent direct to the inventor, to let the title rest in some public trustee for the benefit of the inventor, or the owner, under certain conditions and regulations; but to let it be so that the Government can control the use of it or the suppression of it, or prevent the suppression or oppression of the inventor, etc.

Dr. Alsberg. I have given, of course we all have, a great deal of thought to the abuses that now exist. I have not, however, thought of this particular method of overcoming them. I have not thought that out sufficiently, so that I would feel I would be justified in giving an opinion. It would be a snap opinion right here at the present time. I think the abuses of which you speak are serious and something ought to be done to remove them, but I do not know that I would be willing to go on record, without further thought, as saying that is the best plan of removing them.

Mr. Davis of Tennessee. I wish to state that a system of that kind is suggested by Mr. Thomas A. Edison.

Dr. Alsberg. It sounds to me, as you outline it, like a very good system. I am only wondering whether the amount of machinery the Government would have to use to carry it through would not be enormous.

Mr. Davis of Tennessee. The idea would be for the expenses to be borne by the fees, you understand—a self-sustaining system.

Dr. Alsberg. As the Patent Office is now?

Mr. Davis of Tennessee. Yes.

Dr. Alsberg. It seems to me that would remedy a great many of the abuses that now exist. The abuse of suppressing a patent because somebody else has a patent not quite so good and he does not want to make his factory over to manufacture the new thing, and all that sort of thing. I should think it might be a good plan in that way, but I have not had time to think it out yet.

Dr. Cottrell. I have given quite a little thought to that, and the great difficulty that I see and believe that many others see, will be found in the tremendous responsibilities that would devolve on any organization trying to handle all patents in that direction, especially as it would mean the creation of practically a new department, a new organization, on rather distinctly new lines. The sort of work that is contemplated here might help very largely in furnishing an experimental basis for a clearer conception and decision as to what might be done on this larger scale, later. I think one of the advantages of this bill is that, besides providing for administration of the patents it comprehends, it should help very much in giving us within the Government service itself a clearer idea of the difficulties and possibilities in patent administration; and by getting the experience of concrete results with those patents, it will aid in improving our patent practice in the long run. I think that is one thing that a number of people, particularly the present Commissioner of Patents and the former Commissioner of Patents, from whom we have a letter, have seen as a point of interest in this legislation.

The Chairman. Who will you have heard next?

Dr. Cottrell. I think Commissioner Newton will give us his views.

STATEMENT OF HON. JAMES T. NEWTON, COMMISSIONER OF PATENTS.

Mr. Newton. Gentlemen, I do not know that it is worth while to take up your time with anything I have to say. I would like to state this much, however: The patent system is misunderstood generally by the people. It is misjudged—I mean it is condemned—by a good many people who do not understand it. To my mind it is an ideal in this respect: It is nothing but a system of rewards. The Government says to an inventor, "If you will tell me how to do something new I will give you protection for 17 years." That is the whole thing.

Now, why there should be any objection to that theoretically, or practically, is a mystery to me; or why anybody should object to it at all. But this bill takes care of some incidental cases that arise from psychological reasons. For example, a man in the Government service, working during time paid for by the Government, does not feel at liberty always to take out patents in his own name. That has been noted especially in the Army and Navy.

Hundreds of inventions—valuable inventions—are made by Army and Navy officers and they have always felt a delicacy—indeed, it is against the ethics of their profession for them to take out patents in their own names, and they have felt a hesitancy in doing it. And the result is, a great many of their inventions are seen by contractors who work for the Government, and, nobody else having patented them, the contractors and the men who make supplies for the Army have patented them themselves; and the Government is now paying royalties on a good many inventions, I understand from the Secretary of War and Secretary of the Navy, made by Army and Navy officers who were not careful to take out patents when they made their inventions.

Now, there is a statute that allows a man to take out a patent at the expense of the Government and to dedicate it to the public; that is, nobody else can get a patent on it, and all the rights that he had have thereby been given to the public. But that does not accomplish just what he wants to do.

One of the main benefits of a patent is that it gives the manufacturer a monopoly at the beginning of the working or operation of the thing patented. You gentlemen must give consideration to the fact that when an invention comes into the world it is like a newborn baby; nobody wants it particularly; nobody thinks much of it, and the new thing has got to be developed. And if you take out a patent and throw it out to the public, it destroys the value of that patent, because no manufacturer wants to take an invention, undeveloped, and run the risk of making a market for it and then have somebody else come in and cut off all of his profits. And the value of the patent is right there; it enables the manufacturer to get an industry started. That is the value to the public, too. After the industry is started and the public gets the benefit of the invention, then the patent is beginning to perform the function that the framers of the Constitution intended it should perform, in making work easier for the general public, in giving them something they never had before and something that they wanted.

To simply patent a thing and throw it into the world is a miscarriage of the functions that the patent ought to have, and it destroys the value of the patent not only to the inventor but to the public generally; because nobody would take up and develop the invention.

Now, the object of this bill, as I understand it, is perfecting the system to that extent that it does not throw the patent out for general use, but lodges it somewhere, in the Federal Trade Commission, which can look after that patent, which can see that the men who are licensed under it are properly protected in their monopoly. Because a patent is a monopoly when you come down to the bottom of it, and there is no use in saying anything about its being anything else. It is a monopoly, and by reason of the monopoly it gets its value.

Now, if the Federal Trade Commission can take a patent and protect its licensees and look after it, it will be more beneficial to the public; the public will get more good from it than to allow the patent to be taken out and thrown on the world without anybody looking after it or seeing that it is respected. So I think the bill is decidedly a step forward.

The other advantages that have been pointed out by the gentleman here exist also; but to my mind the big advantage of the bill is to have somebody responsible for a patent, somebody to be alert to see that it is respected and that the licensees under it get a monopoly.

Mr. DAVIS, of Tennessee. Mr. Commissioner, you are satisfied, are you, that the Federal Trade Commission is a proper body to be entrusted with that responsibility?

Mr. NEWTON. Yes, sir. We have talked over that matter quite extensively, and I do not know of another bureau that is better qualified to do it. They have duties now more nearly akin to looking after patents than any other department that I know of.

Mr. DAVIS of Tennessee. I did not mean to indicate any opposition on my part; I simply wanted to know whether that particular feature of the bill had had your attention and met with your approval.

Mr. NEWTON. Yes, sir. We discussed it quite extensively, and that seemed to be the natural Government agency to take it. As to giving the discretionary power to the President instead of to the Federal Trade Commission, you can see the advantage in that, because no one knows but what the Federal Trade Commission may be abolished at some time, just as any other bureau may be abolished. And for that reason it is best to put this matter into the hands of the President nominally. Of course he will have nothing to do with it after he has assigned it to the Federal Trade Commission to administer.

Senator Norris's suggestion that the Commissioner of Patents determine the fees, is wrong, because the Commissioner of Patents ought not to have anything to do with patents after they are issued, for this reason: He has to adjudicate between patentees when the patents are in the office, as to who is the first inventor. Now, if he has anything to do with the patent after it issues, if he has any jurisdiction over it, the applicant in the department will be suspicious of his having some interest to subserve after the patent gets out. So I think it would be decidedly best to leave that matter as it is and not to allow the commissioner to have any jurisdiction over a patent after it is once issued, because he is so often the judge between two or three people who are claiming the same thing in the Patent Office.

This measure has been very carefully gone over. Probably it was brought to a head a few years ago when the Secretary of the Interior wanted to control a patent that he thought would be of very great interest to the public, with the very idea that we have now, that if you throw a patent out and give it to the world, it is of no value. Somebody ought to look after it and see that it is not infringed and see that the licensees are properly protected. He found he had no authority to do it and no other Government official probably had any authority for taking that upon himself and looking after patents after they were issued; and it was that matter that probably helped bring this thing to a head.

I am sure the bill will be quite a step forward in the development of our patent system.

The Chairman. Mr. Commissioner, have you ever had the matter of the wireless signaling patent called to your attention?

Mr. Newton. Yes, sir.

The Chairman. That is the patent that is issued to James Harris Rogers?

Mr. Newton. Yes, sir.

The Chairman. Have you made an investigation of that?

Mr. Newton. Not personally, but I know it was in interference with a German application (I would not tell you this were it not that the thing is public), and the German was not here to contest the interference and the case has gone by default.

The Chairman. I did not have any reference to that, but I have a letter here—I do not know but what you may have received a similar letter—from Assistant Director Rosa of the Bureau of Standards. He wrote this letter under date of August 22 to the chairman of the Committee on Patents.

(Here the chairman repeated the letter from Dr. Rosa, which he read at the beginning of the hearing.)

The Chairman. Have you ever had that matter before you?

Mr. Newton. I never had that question brought to my attention before. But I question the accuracy of it, because the Army and Navy Departments have had access to that application for several years, and if they had known somebody else had made it before, they probably would have called my attention to it. And as soon as the war began I asked the Secretary of the Interior to change the rule of secrecy of the Patent Office as to the Army and Navy officers and to allow any Army and Navy officer to have access to anything in the Patent Office that would be useful to the Army or Navy in winning the war. He approved that rule, and they have had access to all inventions that were useful to the Army and Navy during the war. The examiners in the Patent Office were instructed to call the attention of the Army and Navy officers to any invention of a practical nature that they thought would be useful to the Government in winning the war. And they did suggest a great many of them. I rather think this invention itself was suggested to the Army and Navy people and probably they looked over it, and if it had already been invented by some Army or Navy officer they would have known of it.

The Chairman. If that resolution happens to come to this committee we will have an investigation made of the facts so that the thing can be cleared up. Now, Doctor, who else have you to be heard?

Dr. Cottrell. I think Dr. Howe, of the National Research Council, would like to say a few words.

STATEMENT OF MR. H. E. HOWE, VICE CHAIRMAN OF THE DIVISION OF INDUSTRIAL RELATIONS, NATIONAL RESEARCH COUNCIL.

Mr. Howe. I am not a Government employee, nor an inventor, but I have had, as a consulting chemist, considerable experience in industry, and can judge of the way this measure will work out. I think all I can add to the discussion, in view of what is now in the record, is to give an example of what has already been done in this direction. While this particular bill may be looked upon as an experiment, I am acquainted with one rather large undertaking along similar lines, in the interest of the public, tried out by an organization through which it has not only been commercially demonstrated as perfectly feasible but also as successfully achieved.

Dr. Cottrell is entirely too modest to refer to his own accomplishments. Some time ago he perfected the Cottrell electrical precipitation process, originally invented to abate a nuisance by eliminating acid mists from the flue gases of smelters, and then applied to collecting dust and fumes from the flue smoke of these and other plants. Subsequently he conceived the idea of assigning the patents covering his process to a nondividend-paying corporation in the interest of scientific research, to which all profits derived from licensing the use of the process were to be devoted.

The result has been that the process has been worked out along a great many lines not contemplated in the beginning, and the whole undertaking has been made successful in a measure which otherwise would not at all have been possible. This has inured to the benefit of the public in many ways, both indirectly and directly. In the latter way, particularly in the recovery of commercial quantities of potash from flue dusts, which was of great importance during the war. And the process has made it possible in the case of many metallurgical operations to recover vast amounts of materials which otherwise would be lost.

I am sure those familiar with the experiment referred to are convinced that if the public is to get the most out of an invention, dedicated to it, there ought to be a Government method of aiding the broad-minded inventor and protecting his patent. There must be some agency to take it through the initial stages and to provide the means for commercial development before anyone will take it up, and, at the same time, be prepared to guarantee that measure of protection which capital requires in working out anything new.

So far as I am aware, the only inventions that have been dedicated to the public and have become of any wide use have been those dedicated by the manufacturers themselves, out of a spirit of public philanthropy, after their own complete development of the process. An example of that is the case of phosphorus used in the making of matches. The invention was worked out by a private concern which, actuated probably by philanthropic and humanitarian reasons, dedicated the patent to the public at large. And I am sure that sort of thing could not have been done had it been dedicated in its original form without the expenditure of the money which must go with any particular invention; that is necessary to its development.

I will make one other point only, and that is, the public, after all, is not protected necessarily by the dedication of a patent to the public. Often such patents are fundamental and require many other processes before they can be made at all successful on a commercial scale, and this gives an opportunity for subsequent inventors to take out other patents on improvements, which may in turn be used against the public rather than for them, thus defeating the intention of the original inventor.

I am very sure that industry, on the whole, which welcomes new things to increase production, to make labor easier, and perhaps give us new things for our use, would be very glad to have this sort of opportunity presented for those who do not feel they can take out patents for themselves and who consequently do not take them out under present conditions, knowing they will not be developed to a stage where they will become useful.

The CHAIRMAN. Who is your next speaker?

Dr. COTTRELL. Mr. Curtis, of the Department of Justice, is here. He tells me he has nothing directly that he cares to initiate in the way of offering suggestions, but would be very glad to answer any questions that the members of the committee may wish to ask regarding the methods and machinery for handling Government patents, as he has been handling them for the various departments through the Department of Justice.

STATEMENT OF MR. E. G. CURTIS, SPECIAL ASSISTANT TO THE ATTORNEY GENERAL IN CHARGE OF FEDERAL PATENT LITIGATION.

Mr. CURTIS. A few days ago an inventor from the Bureau of Mines came to my office to discuss an application for a patent which was in interference, and he dropped the casual remark that he had about eight other inventions he never had done anything with. I asked him what he intended to do with them, and he said: "Why, eventually to give them to the Government." He said: "I have kept them secret for five or six years, so that no one will steal them away from me, but," he said, "unfortunately, I find other inventors in the commercial field are beginning to develop the same thing." And I said: "Why don't you hurry into the Patent Office and get yourself covered for the Government's protection?" He said: "No one will pay my bills. I will have to make my application myself, and, furthermore, there is no one to take over my applications if I make them. The Secretary of the Interior does not want to do it; at least, he does so under protest." And he said: "If there were only some department of the Government which would take over my inventions, and if there were only some way of my recovering my own expenses and paying the fees and that sort of thing, I would do it, but at the present time I can not afford to. So that for these reasons I have simply kept quiet."

Now, when I heard of this bill coming up, which evidently is aimed in part to remedy such a situation as that, I volunteered what little help I could give to assist in explaining the need for such legislation. But with the Commissioner of Patents, other patent attorneys, and the representatives of the Bureau of Mines present I do not think you have any need for any advice I can give outside of what I have already told you.

Dr. COTTRELL. That concludes all we have, Mr. Chairman.

The CHAIRMAN. Is there anybody else who desires to be heard either for or against the bill?

STATEMENT OF MR. A. M. HOLCOMBE, PATENT LAWYER, WASHINGTON, D. C.

Mr. HOLCOMBE. I may say that I was formerly the chief of the patent section in the General Staff of the War Department, and more or less concerned with the policy of the War Department toward inventions. I would like to preface what I wish to say about Dr. Rosa's letter by a short statement of what occurred in the War Department, particularly in the Ordnance Department, in which I was serving as a major at the time, and which came under my attention as chief of one of the contract sections of the Ordnance Department.

I found early in the war that in the case of contractors to whom we were disclosing invention which had been embodied in military devices (ordnance, for example), and who were aiding us in manufacturing these devices and developing them where development was necessary, and in getting the production that the War Department required at that time—I found that individuals affiliated with those contractors were filing applications for patents for improvements on these very devices.

I found one case where an improvement was shown in drawings of the department, in identically the same form which was claimed by the alleged inventor. And in order to protect the Government's rights in its own property (and an invention is property and is protected by a patent in such a way that a legal right to the invention can be maintained), in order that the Government should maintain its legal right to its property in its inventions made by its employees hired for the purpose, it was necessary to oppose in the Patent Office the grant of inventions to outsiders. And the way to do that under the laws now in force is for the Government to file its own application. That can only be done by the inventor filing the application and either assigning it to the Government, or, as was done in the War Department, giving the Secretary of War the control of the application. We did not go so far in the War Department as to require the inventor to assign the invention to the Government, because we felt that a majority of our inventors were men who had been brought in from their own private businesses; successful men who had been brought in from business with which they were thoroughly familiar, with the purpose of attacking our problems with their special knowledge of the business and with our suggestions as to the problems we desired to overcome.

Now, men of that stamp could be expected to make inventions and did make inventions. And those inventions, being partly the result of their experience in their private businesses and partly the result of their knowledge acquired by their connection with the department (and the inventions generally speaking would be of very great commercial use to them in their own businesses, as well as being of extreme importance to our military program) we felt, in order to encourage those men to make their inventions and to put the inventions into shape to be available for our use, it was wise simply to require them to give the control of the application for the patents to the Secretary, and to agree that the inventions could be used for governmental purposes without any cost, without any payment of any royalty or fee, and to permit such inventors to retain any commercial rights and any profits they might be able to make out of the commercial exploitation of the inventions. In many cases those inventors got their own concerns to cooperate in the development of the inventions and assumed a considerable part of the expense.

That was the reason for the War Department's policy being somewhat different from the policy of the Department of Agriculture, for example, outlined by one of the witnesses before the committee. The effect of the adoption of that policy was to permit the Government to file applications for patents for the various inventions that were developed in its various bureaus, and thereby to contest in the Patent Office the title to the inventions with any outsider who might have made an identical invention independently, or might have acquired some knowledge of what the department was doing and used that knowledge as a basis upon which to make improvements. I do not know just how many cases of that sort have actually been contested in the Patent Office, but enough of them originated in the Ordnance Department to make it seem wise to extend the same policy throughout the War Department; and that policy was adopted by the Secretary of War as a result of the experience of the Ordnance Department.

The same situation is presented in Dr. Rosa's letter, where the Bureau of Standards, worked in cooperation and collaboration with the Navy Department in developing this system of submarine telegraphy. If the policy of the War Department had been followed by the Navy in the early stages of that development it is probable that a patent application would have been filed by some one in the Bureau of Standards, some Government employee, or some one in the Navy Department, or possibly a joint application by a Navy man and a Bureau of Standards man, if the invention were a joint invention.

That application, then, would have been officially recognized in the Patent Office, and the Commissioner of Patents would have set in motion the machinery of the Patent Office, which is provided under the authority of statute for the very purpose of determining the right of priority of invention, and the matter would have been determined in the Patent Office in advance of the grant of the patent. And if the bureau officials, or the Navy Department officials, were really entitled to recognition as the inventors of that system, the patent would have been granted to them and not to the other person. On the other hand, if the other man had really originated the idea and the bureau and department officials were copying it, the originator would be entitled to the basic patent and the department and the bureau would get only such improvements as their employees or officers had actually made, which would seem to be a perfectly fair solution.

But in order that the Patent Office can take cognizance of the fact that department officials have been working on the invention, an application must be filed. And at the present time there is no incentive to the filing of an application by a bureau employee in his own name, as it must be filed under the present laws, because it is a matter of expense to him and there is no way in which that expense can be reimbursed to him without the sanction either of some Executive order under an appropriation which permits the money to be spent for such purposes, or under a special act of Congress which would enable the Federal Trade Commission, for example, or any other suitable bureau to administer inventions and patents.

I thought, perhaps, you would be interested in an explanation of Dr. Rosa's letter. It simply was this, that at the time when the development was done at the bureau, the policy of the bureau was not to allow the employees of the bureau to file applications for patents in their own name; and, of course, if they could not be given the opportunity to take patents in their own names, there was no way of reimbursing them for the money which is necessarily expended in making the application and getting the patent.

The Chairman. Are there any other witnesses?

Mr. Curtis. I would just like to give a little information on the question you asked before in reference to that Rogers matter. I know nothing of it officially, but from talking with various Navy officers I gather that the matter will bear close investigation. I do not think I have authority to say anything more at the present time.

The Chairman. Inasmuch as Acting Director Rosa's letter was primarily written in connection with this bill, I wanted to incorporate it in the hearings, and I wrote him that when this bill comes before this committee we will be glad to see that a proper investigation is made of the entire case. Of course if the Government is making an investigation of it the thing will probably be cleared up before we will be called upon to take any action one way or the other.

Mr. Curtis. Possibly it may be. But I just wanted to make that suggestion.

Mr. Wheeler. Has it come to you officially?

Mr. Curtis. Not officially. I think it will come to me before long, officially.

The Chairman. Of course, I do not want to go into the case, except to incorporate Acting Director Rosa's letter feeling that any investigation that would be made ought to be made thorough.

Mr. Curtis. This much can be said: There is evidently a conflict between Rogers and certain inventors of the Navy Department, involving the question as to who was the first inventor of that apparatus. And the conflict is somewhat deeper and more real than might appear on the surface.

FURTHER STATEMENTS AND DATA SUBMITTED, EXPLAINING AND SHOWING THE NECESSITY FOR THIS LEGISLATION.

Statement by Dr. Cottrell.

ABSTRACT OF STATEMENT.

The governmental agency here contemplated is proposed in view of the following consideration:

1. There is no fixed or general policy dealing with inventions and patents developed by Government employees in the course, or as a result of, their official duties, and consequently no governmental administrative machinery for translating such inventions and patents into actual public service.

2. In cases where patents are developed by the combined efforts of Government employees and others, difficulties at present arise concerning the adminis-

tration of same because of the conflict between the rights of the inventors and those of the United States.

3. There is no way at present by which patentees in or outside the Government service can dedicate their patents to the public with the assurance that the public will reap the full benefit therefrom, because an invention covered by a patent so dedicated does not interest capital, and because it may be excluded from public use by patents subsequently taken out by others.

4. Conditions brought about by the war, causing an unprecedented demand for inventions, and the industrial developments and readjustments now following the war, call imperatively for guidance. Also the host of inventions developed during the war in the many Government bureaus and other organizations, primarily for war purposes, but which have a peace application of inestimable value, should be coordinated, conserved, and translated into industrial use.

5. There is herewith provided a means aimed to be acceptable to the medical profession of patenting and consequently properly controlling inventions in the field of medicine and surgery, the control of patents by private interests being contrary to the ethics of the medical profession.

6. It is desirable to have governmental administration of a certain type of patents, not ordinarily attractive to manufacturers, in order to provide production of needed devices or materials for governmental or public purposes.

7. The President, under the authority of Congress, has set a precedent for the proposed legislation by authorizing and directing the Federal Trade Commission to administer enemy-owned patents.

8. The patent administration here contemplated provides for revenue sufficient to cover the expenses of its operation.

9. Provision is made for some remuneration to patentees, to stimulate invention.

This bill is merely an enabling act. There is nothing mandatory about it. It is aimed primarily to permit the Federal Trade Commission to undertake for the scientific bureaus of the Government, as this may be desired, the administration and development of certain classes of discoveries made from time to time by members of their staffs in the regular course of their duties, and which need only the proper guidance to become of great importance to industry. Comprehended in its scope, however, are inventions of those outside the Government service who desire to dedicate their patents to the public.

It is essentially an experiment in constructive economics which, if successful, can not fail to lead to results of fundamental importance, and which, if unsuccessful, will, by reason of its purely permissive character, be self-eliminating. This will be an expensive experiment, since its operation is aimed to be self-supporting.

As is well known, the Government has for many years been fostering and developing scientific research among its workers, and this phase of its activities has reached a very advanced state of efficiency and productiveness, as exemplified, for instance, by progressive improvements in the machines and methods of husbandry resulting from the labors of the Department of Agriculture; by the safety appliances and highly developed technical devices used in our mines; by the advancement in the methods and processes of metallurgy, and by the ever-increasing volume of chemical and other exact scientific discoveries issuing from the many Government laboratories.

But many valuable contributions to knowledge and a whole mass of scientific facts and principles developed in the course of the numerous and varied investigations carried on by the Government have failed to reach and benefit the general public, because of a lack of the means of translating them into actual, practical service. There has always been an obstruction in the way of making them adequately and fully available to industry, because there has heretofore been no administrative machinery for exercising this function.

But it is conceived that this machinery has now been provided by the establishment of the Federal Trade Commission, which is peculiarly well adapted for the purpose, because of the broad character of its powers and of its intimate touch with the business life and activities of the country, and because the President established a precedent by entrusting to it the administration of the patents of enemies and allies of enemies during the war, which obligation it fully met. It has, therefore, had valuable experience in handling this class of business and is prepared to enter into the work here proposed, which very appropriately fits into the general scheme of its organization. Furthermore, this measure will permit the Federal Trade Commission to do constructive economic work of far-reaching importance, and the opportunity here presented to a governmental organization of disinterested experts to study the practical administration, development, and application of patents from both the side of the assignee and the licensor, can not but have a most salutary influence in the shaping of future patent legislation.

This bill is identical with one introduced in the House (H. R. 14944), by request of the President, during the last Congress, except that section 3 has been added; but this in no way affects the substance of the measure. Besides having the approval of the President, it was indorsed by the Secretary of the Interior and was welcomed by the Federal Trade Commission, as disclosed by the following communications:

AUGUST 20, 1918.

MY DEAR MR. PRESIDENT: There is need for such a bill as that inclosed, as we are constantly having offers of patents which the law does not allow us to accept, and the men in the departments are making inventions which there is no way to control. If you think well of this bill, I suggest that you turn it over to the Federal Trade Commission, or I will do this if you wish.

As concrete illustrations of the situation, I have recently been offered the Gillett furnace for making brass, and the Mohr sighting apparatus for aeroplanes, both of these inventions being the work of men of this department.

Cordially and faithfully, yours,

FRANKLIN K. LANE.

The PRESIDENT,
THE WHITE HOUSE.

THE WHITE HOUSE,
Washington, August 21, 1918.

MY DEAR LANE: I have your letter of the 20th inclosing the bill which would authorize some agency of the Government to accept the use of patents and inventions of various sorts which we are not now permitted by law to accept and will take pleasure in referring it to the Federal Trade Commission, because I think with you that it would be extremely useful to have such an authorization.

Cordially and sincerely, yours,

WOODROW WILSON.

Hon. FRANKLIN K. LANE,
Secretary of the Interior.

AUGUST 23, 1918.

DEAR MR. PRESIDENT: I have considered the bill which you have transmitted and have discussed it with my colleagues, and we are unanimous in regarding it as a necessary and timely measure.

Much valuable material evolved in the scientific bureaus of the Government is constantly failing to reach and benefit the public because there is no administrative machinery for its translation into industrial service.

Employees of the Government should be rewarded for their inventions, both in justice to them and as a stimulus to further effort.

This bill provides a way in which inventors outside the Government service may dedicate their patents to the public. Under existing conditions it is impossible for them to do so with any assurance that the public will benefit, because when an invention which is covered by a patent is dedicated to public use capital is not interested and the invention is not likely to be applied in industry.

The commission believes in this measure and will gladly undertake its administration. We have now by Executive authority a division administering enemy-owned patents, a type of work in many respects identical with that which this contemplates.

We are returning the inclosures in your letter.

By order of the commission.

Very respectfully,

WILLIAM B. COLVER, *Chairman.*

Various views have been held by Government officials concerning the legal status of patents and patentable inventions developed by Government employees in the course or as a result of their regular duties. In the process of litigation in patent cases certain doctrines of law have been laid down in court decisions with regard to shop right, implied license, etc., but these have not been uniformly understood or applied in the Government service. It is a fact, however, that the law in regard to the ownership of patents by Government employees (excepting employees of the Patent Office) is exactly the same as it is for the employees of private individuals or corporations.

A wide range of policy and point of view has existed among the departments and even among the different bureaus of the Government as to whether the inventor in Government service should be compelled to donate his invention to the Government, with or without first patenting it, or whether he should donate it at all; whether in the first event he should receive any compensation therefor, or not, and whether he has the right to develop his patent himself, or to sell it to another; and questions of ethics in this connection have frequently arisen. Such considerations as these have been dealt with piecemeal, arbitrarily, and often very incidentally and with some specific and immediate need in mind.

Thus, in certain bureaus of the service employees must dedicate their inventions or patents to the Government outright; in others they are prohibited from taking out patents at all; in others, if they take them out, they must dedicate them to the public; in others, again, the employee may retain title to the patent and make what profit he can with it in the open market, but the Government reserves the right of free license thereunder. In some cases this free license is restricted only to the bureau in which the invention originated, the patentee being at liberty to profit individually from the use of his invention by other branches of the service.

Then, again, in the same division, or bureau, the requirements on the individual will vary according to the nature of the service for which he was specifically employed and the character of the invention, i. e., whether the invention was evolved in the course or as a result of his regular duties, or not. These illustrations represent merely a few of the many questions arising with regard to the existing relation between the Government and its employees in the matter of inventions and patents.

If the employee dedicates his invention to the Government it can not fully benefit the public, because, as has been stated, there is no existing instrumentality for translating inventions protected under Government-owned patents into practical, industrial service. Indeed there is now no governmental agency empowered by law to even take title to patents.

If unconditional dedication is made to the public, the public is generally the loser, because protection to the capital which would be required to exploit the patent is lacking, and because a patent so dedicated, though possibly pioneer and fundamental, may be in such a form that a subsequent patent taken out by another less generous inventor on an improvement practically essential to its effective application may operate to exclude its free public use. Also, in this contingency, its successful use by the Government itself is prevented unless the Government assents to whatever conditions the owner of the improvement may impose. If for any reason this should be deemed inadvisable, the Government can, of course, use the improved invention without express license, just as it can use any other patented invention, as provided by special act of Congress, June 25, 1910 (Stat., 851). But the situation thereby created is unsatisfactory, because such action entails litigation before the Court of Claims to determine a reasonable compensation to the patentee, in addition to which the approval of Congress by special enactment must be had before the compensation can be awarded. This is a formidable, costly, and tedious business, both for the Government and the plaintiff, and besides works particular hardship and loss to the latter. Indeed, unless the compensation involved should be large, it would probably be consumed in the process of securing it.

Save in rare and exceptional instances, Government employees have derived little or no material return from their inventions. It is a general custom among industrial employers to reward their employees directly for valuable inventions which they evolve in the regular course of their duties, either by sums of money, as bonuses, or by increase of salary, or by gift of stock, or some other tangible form of interest in the business, as a recognition of merit and a stimulation to further effort. This has been proven a sound business policy, but nothing analogous thereto has existed in Government employment, excepting that general excellence of service has always been a determining factor in routine promotions.

A further unsatisfactory situation in the patent field is encountered in cases where investigations are conducted jointly by experts of the Government and those of outside agencies, such as universities, technical schools, state institutions, and industrial concerns. More and more of such cooperative work is being done, to the great benefit of both the Government and industry. During the course of it, inventions are sometimes evolved through the mutual efforts of the cooperators, and patents are granted therefor.

Now, it is highly important, if not absolutely imperative, that such a patent, or group of patents, be administered and developed as a unit, but the question at once arises as to how this shall be accomplished, to the end that the maximum benefit to industry shall be secured, the patent shall be guarded against falling into adverse hands, the control of the Government over the production of its experts shall be maintained, and, at the same time, the equitable interests of the inventors shall be conserved.

The tendency of the generally unsatisfactory situation outlined herein has been to discourage inventive genius among Government workers, and the considerations enumerated call loudly for some settled, definite, and equitable disposition of this involved matter, particularly in view of the enormously increased activities and needs of the Government and the business world brought about by the demands of the present war, and the unprecedented need for inventions which has ensued.

During the war one important fact was demonstrated. It was conclusively proven that inventive genius working without direction was comparatively futile. Not one invention in the military field out of 10,000 offered the Government by isolated inventors proved of any value whatever. It was only when the best scientific brains of the country were mobilized, through the Council of National Defense, into definite groups, each group specializing in some particular field, all in cooperation and in close touch with similar groups of the Entente, that the weight of American inventive genius as a most important factor in winning this war began to be felt. From that moment the submarine, the real problem of the war, was doomed. This grouping and coordinating of the country's scientists developed a vast amount of inventive material, the major part of which has a direct peace bearing of inestimable value but which is in serious danger of being lost through the want of such an agency as herein contemplated to conserve, develop, and administer it and to translate it into industrial application and use.

For instance, the sound-ranging device developed to enable our navigators to locate and avoid submarines, developed commercially, would save millions of dollars and thousands of lives at sea by preventing collisions due to fog. The special aeroplane cameras, perfected for military purposes by the group of scientists assigned to that subject, make possible a mode of surveying which has revolutionized the art. An accurate map may now be made by aeroplane of the most inaccessible territory at heights even of 25,000 feet, and in a few minutes, by means of certain fixed points and a little calculation, a survey of that territory can be obtained that would hitherto have been either impossible or would have consumed months or years of time.

There is another phase of the patent situation that has bearing here. It is contrary to the ethics of the medical profession for its members to patent new devices and curative agents. The consequent absence of patent protection greatly increases the difficulty of properly controlling these things, and control in many instances is vitally necessary. Great harm has been worked by the manufacture of medicines getting into adverse hands, and it has been necessary in some cases to have special legislation passed to relieve the situation. Under the provisions of this bill such inventions, fraught with great possibilities for good or ill, could be wisely administered for the welfare and protection of the public.

It sometimes occurs in the Government service that an invention is developed that the Government would like to make use of, or to introduce for the benefit of the public, but which has an application not general enough to be attractive to manufacturers. An instance of this is the Gibbs breathing apparatus which has proven so efficacious in mine rescue work. Heretofore there has been no satisfactory way of accomplishing the production of such a device, there being no agency authorized to negotiate the business. Under this bill this agency would be provided.

It is believed that the bill herewith proposed provides the basis of a plan broad enough to work out the solution of the sort of problems referred to above, while it does not attempt to obtrude mandatory regulations in any present system for coping with them. Under its provisions the relation between the inventor in the Government service to the Government itself is clearly established, and the inventor will be encouraged by the knowledge that he will not be deprived of credit for the work of his genius, and, in the event of his invention proving of actual public service, he will receive some material return therefrom. No question of ethics can arise to embarrass him and he will be relieved of all care and expense in the administration and disposal of his patents.

The Government derives its advantage under this measure in the stimulation of inventive productiveness among its workers, in the control it obtains thereof, and in the valuable experience it gains in this field of practical economics, which will be reflected in improvements in patent law.

The public reaps its benefit by having cleared away the obstacle heretofore existing between the inventor's genius and the full and proper industrial application thereof, thus liberating and giving impetus to invention, with consequent increase of productiveness tending toward improvement of working conditions and general prosperity.

In addition, the bill provides for revenue sufficient to cover the expenses incident to its operation.

Statement in Behalf of this Bill by Mr. Edward S. Rogers, Patent Attorney, of Chicago, Ill.

The purpose of this bill is to make it possible to unify the practice of the various bureaus of the Government in the matter of inventions made in the Government service. At present there is no general manner of handling these things. The commonest practice is either to publish the invention broadcast in some Government publication or technical journal without taking out a patent, in which event the inventor gets no reward, or to patent and then dedicate the patent to the public. The result is the same. It is simply a roundabout method of doing the same thing. Sometimes the inventor is permitted to take out a patent, giving the Government a shop right or license of some sort. Some divisions require patenting, licensing the Government; and then permit the inventor to take out foreign patents for his own benefit.

The public is in no way benefited by any of these methods, because there is nobody whose business it is to translate these inventions into industry. Indeed, there is now no governmental body which can take title to a patent for the public.

From the point of view of a practicing lawyer, this proposed measure strikes me as an entirely feasible one. There is no doubt about the need of such legislation. There is now no uniformity of procedure—one bureau does one thing; some other does another. There being no reward, there is little incentive for Government workers to invent new processes or devices, and what they do invent is not made available to the public. Dedication without a patent is useless. The surest way to kill a new idea industrially is to give it away. No sane business man is going to invest capital in a new thing without some measure of protection. The minute his pioneering becomes profitable, others, who have had no initial development expense, rush in and profit by it.

It would seem as if the Federal Trade Commission were the logical Government agency to perform the administrative work connected with this legislation. The commission, as I view it, is more than a policeman for the business community. It is now, and can be in the future, a constructive force—a helpful thing to industry. It can very well be to the business world as potent and as essential as the Department of Agriculture is to the farmer. A great deal is now being done along these lines—one has only to read the commission's report for the fiscal year ending June 30, 1918, to see this—but, of course, the activities of the commission in its duties as an aid in enforcing the antitrust laws are more spectacular, and are naturally more talked of than the quiet, careful, and very useful work that it is constantly doing in aid of business, which never gets into the newspapers and of which few people, who are not directly affected, ever hear about. It is very largely a matter of emphasis—one is news and gets into the papers, and the other is not and does not become directly known.

The commission is always in touch with the industrial needs of the country, and I am authorized by the commission to say that it regards this bill as a measure which would be helpful to industry, and the commission will gladly undertake its administration.

The administrative machinery is already in existence. Section 10 of the trading with the enemy act authorized the President to administer enemy owned or controlled patents. This power was delegated by the President to the Federal Trade Commission, and I believe it was carried out efficiently and in a way that greatly benefited the public. There was a board of three men who passed on applications for licenses. For the scientific problems involved, the Bureau of Chemistry, the National Research Council, the Public Health Service, and the Surgeon General of the Army and the Navy were constantly consulted. There was a corps of economists, accountants, and statisticians available.

The experience derived from the solving of practical problems has been of great value and makes the commission the logical Government instrumentality to carry out this work.

There is need of haste in this matter. There is a very important peace use for the inventive by-products of our war activities, and these may be lost if not gathered before there is complete demoblization of the various emergency war bodies. There is no doubt about the need of such legislation as this, and there is no doubt that it is sound in principle.

The intelligent way of handling such problems, which are essentially business problems, is to handle them in a businesslike way. This measure is intended as an enabling act to permit this. This is good for the inventor, because it gets him something for his effort; it it good for the public, because it makes the inventor's work available to it.

There is another aspect of the situation which merits consideration. It is contrary to the ethics of the medical profession for its members to patent new devices and new medicines. The absence of patent protection eliminates all possibility of any control; and there ought to be some control. In the case of arsphenamine, which is the official name for the substance introduced as Salvarsan, the Trade Commission established standards and saw to it that these standards were observed by securing the cooperation of the Public Health Service, and requiring submission of samples and frequent inspections. It is a simple matter under a patent license, but a very difficult one otherwise. There is inability to control makers of new drugs because the taking of patents by private interests collides with the sound rule of ethics of the medical profession forbidding it. It is desirable from many standpoints that such things be patented, but in my opinion these patents ought not to be in private hands. Some instrumentality of the Government ought to hold such patents as a trustee for the public in order to prevent exploitation. And frequently it is inexpedient to let everyone who may choose try his hand at the manufacture of drugs and medicines, as could be done in the absence of some patent control.

To summarize: This measure gives the opportunity to unify the practice with regard to patents in the different Government bureaus. It offers an incentive to inventors in the Government service by securing for them compensation for their discoveries. It makes these discoveries available to the public, because it permits their administration according to business methods, and, while I do not care to emphasize this point, it does not require a great stretch of the imagination to see that it is possible that there may be very substantial returns to the Government from the licensing under patents which may be held in trust in the public interest.

Both Australia and Canada are trying to find a solution for such problems as are involved in this issue, where they affect their own Government employees.

Government-Owned Patents.

FROM PROCEEDINGS OF THE AMERICAN MINING CONGRESS, NOVEMBER 13–16, 1916.

[By F. G. Cottrell, Washington, D. C.]

During last year the Bureau of Mines has been brought very squarely to face the problem of what to do about patentable inventions developed in the Government's own service. I do not, however, wish here to discuss in detail the present policy of this particular bureau, that being a matter for the director to deal with in person, but speaking as an individual rather than as a member of the Bureau of Mines staff, there are some general questions suggested by the idea of Government ownership of industrial patents which seem to me well worthy of the thoughtful consideration of this body and I am taking your time to-day more particularly in the hope of turning attention to the need of a broad enough working plan to fit all branches of the Government service wherein it may prove desirable to deal with these matters.

The taking of patents by the Government, like many other similar functions, has within it the possibility of very valuable public service if wisely administered, but on the other hand could do much mischief, both inside the service and out, if initiated and developed without a truly comprehensive and sympathetic understanding of its relation to the whole spirit, history, and working of our present patent system.

It must be remembered that this latter was in its fundamentals conceived when the organization of industry was on a very different basis and scale from what it is to-day and the relation of the inventor and his work to the fruits thereof far simpler and easier to understand and define than at present with the ever-growing complexity of our economic mechanism.

In this day of widespread interest in the regulation of natural monopolies it is certainly both fitting and necessary that we give due attention to our patent system as the earliest and in many ways the most striking instance of the recognition and regulation of monopolies by our National Government. In fact, patents may appear at first sight as purely artificial rather than natural monopolies. This is not, however, an entirely tenable view.

The first basic reason for granting patents on invention is to substitute a definite and regulated form of monopoly under the law for a broader and entirely unregulated one which the patentee might otherwise secure by retaining his secret. Even to-day many manufacturers prefer to rely upon this secrecy in many instances rather than take out patents.

The second basic reason for issuing patents is to encourage and stimulate invention

The third reason for patent protection is to give adequate opportunity and encouragement for intensive commercial development of the invention which is almost invariably necessary to make it generally available on its own merits to the ultimate consumer.

In the case of inventions made in Government laboratories the first of the above reasons for patents has no significance as it is within the Government's own hands to determine the matter of publicity irrespective of patent.

The second reason for patents—stimulation of invention—might have a meaning in the Government service on the ground of recognition and prestige even though no direct pecuniary reward came to the individual inventor over and above his regular salary.

But it is by all odds the third reason, the necessity of fostering under patent protection the early commercial development of most new inventions, that would seem chiefly to justify the taking out and administering of Government patents in carefully investigated and approved cases.

The chief danger to be avoided, if the system of taking patents became general in the service, is probably the multiplication of cases and the patenting of trivial details for which a dangerous precedent has already been set by the patent departments of the commercial interests who, due to their rivalry and close competition, perhaps have a greater excuse for this than would the Government. Still even in the production of present publications, Government employes are often charged with taking too great an interest in turning out a given number of pages, and it is easy to imagine that any such tendency which may exist would make itself still more obvious and wasteful of time and energy of all concerned, if applied to the field of patent applications.

These are matters, of course, upon which it is impossible to legislate in detail, but in working out any comprehensive system care will have to be taken to so clearly fix responsibility for the exercise of judgment in these particulars that it can not be escaped or ignored.

Even among some of those in the Government service who would be most directly concerned with such patents, should the system be generally adopted, there seems to be a considerable lack of appreciation of the amount and importance of the administrative work necessary, not only to render patents of the greatest possible public utility, but even to prevent them from becoming an actual drag on the wheels of progress.

The taking of patents by Government employees and the adjustment of questions arising therefrom is no new subject, but so far it has not received the general study it deserves, but, like Topsy, has "just growed."

There is at present no legislation nor Executive order fixing a general policy or procedure with regard to patents by Government employees, and thus each department, or in some cases each bureau, has dealt with the matter piecemeal, and often very incidentally in its own way, and usually with only its own specific needs in mind when immediate necessity arose, with the consequence that a wide range of policy and point of view is to be found in practice. Thus in certain divisions of the service the employees are prohibited from taking out patents at all; in others, if they take them out they must be "dedicated to the public"; i. e., thrown open absolutely and unrestrictively to public use from the outset. In others, again, the employee may retain title to the patent and make personal profit therefrom in the open market, save for a free license to the Government for its own uses. In some bureaus this free license is further restricted to the particular bureau, the patentee being at liberty to profit individually from the use of his invention by other branches of the service if he can.

Even in the same division of the service the requirements on the individual will vary, depending upon the character of the invention and the nature of the service for which he was specifically employed. For example, it has been decided that if a soldier or line officer invents, say, an improvement to a cartridge belt, he is individually entitled to patent to it and can deal with the Government on the matter as could an entire outsider, because the improvement of accouterment was no part of his regular duties; but if an Ordnance officer gets out a new gun carriage, it is in the line of his regular duty and belongs to the Government.

Similarly in the case of anyone employed in the civil service for the specific purpose of research along a particular line, anything developed therein is at the command of the Government, at least as far as this country is concerned. But in such cases the question of foreign rights is still open; and while these may for the present be considered a legitimate and theoretically very natural form of bonus to go to the individual in recognition of special initiative, still to those who have had experience with developments of foreign patents the question will arise whether after all they are not apt to prove more of a snare and a burden than an asset.

These illustrations merely represent a very few of the many questions arising with regard to the relation of the Government to its own employees in the matter of patents.

On the larger and more important side, viz, that dealing with its relation to the industries and the public at large, the matter is apt to be even more complicated as time goes on, so that the foremost need at present would seem to be the definite location of responsibility for the study and gradual development of a comprehensive and consistent system of administration of this whole subject of patents within the Government's own service.

This guiding and unifying element between the different departments should be permanent in its character and organization, as the work must constantly develop and maintain a thoroughly up-to-date and helpful relation to the industries. The fundamental aim of Government patents need be in no sense that of destructive competition with private enterprise; but, on the contrary, should be to aid, encourage, and stabilize the latter by supplying some of the connecting links for whose early development it might be particularly hard to secure private backing, even though the final result was of recognized public benefit.

The whole policy underlying the issuance of licenses must be conceived and executed in a broad and intelligent manner, with a full understanding of the complexities of modern industry and trade. In its various ramifications it is a subject somewhat resembling and fully as complicated as railroad and other public-utility regulation. The Government is already responsible for the general guidance of our whole system of patent law and is of necessity being called upon steadily to make more and more detailed study and pronouncement, either legislative or judicial, concerning the detailed working of the system in both industry and trade. It certainly seems that if the Government itself had also the experience of dealing with the working of these laws from the side of the assignee of patent rights, it might insure a more thoughtful and sympathetic understanding of the entire subject from both sides than is now always possible to secure.

The question as to just where responsibility for this general oversight and guidance of business administration of Government patents could best be vested is an extremely important issue. The scientific and technical aspects of the work should, of course, be left to the individual departments and bureaus as at present, but experience shows that few, if any, of these as at present constituted, have the organization or take the interest in the details of patent administration in general to insure adequate attention to the subject along the lines above indicated for the public good.

The two alternatives which most naturally suggest themselves are perhaps the creation of a separate commission, similar to the Interstate Commerce Commission and the Civil Service Commission on the one hand, or the enlargement of the functions of the Patent Office itself on the other.[1]

The first has the advantage of giving the new work a perfectly fresh start, but has the generally recognized disadvantage of creating one more isolated administrative unit to be kept in coordination with the rest of the executive machinery. If the work were placed under the Patent Office, it would presumably mean, eventually, the establishment of a separate division of patent administration which would be quite distinct from the present work of the office, but it would have the advantage of assuring as far as possible that the new work would go forward along constructive lines fully in harmony with the original spirit and intent of the patent system as a whole and might be expected to have a healthy and helpful influence on the other work of the Patent Office in bringing home to its official family in a very practical way the live problems met with in the industries through the administration of patents after they leave the office.

LETTER OF THE SECRETARY OF THE INTERIOR REGARDING ASSIGNMENT OF PATENTS TO HIM.

DEPARTMENT OF THE INTERIOR,
Washington, July 19, 1918.

The DIRECTOR OF THE BUREAU OF MINES.

DEAR MR. DIRECTOR: By your letter of July 3, 1918, submitted for my approval, you called attention to the fact that W. H. Gillett and J. M. Lohr, employees of your bureau, had executed an instrument in which they attempted to assign and transfer their interests in patents granted to them on certain types of electric furnaces to "Franklin K. Lane, Secretary of the Interior, and to his successors in office, as trustee or trustees in trust for the use and benefit of the people of the United States" and to authorize him and them—

"To own and control said patents and to grant licenses under said patents to such party or parties and upon such terms and conditions as said trustee or trustees may deem proper, to prevent the use of the inventions described in said patents, or either of them, by parties other than the licensees, by bringing suits for infringement against any and all unlicensed users of such invention or inventions, and to do all acts that said trustee or trustees may deem proper in encouraging the proper use of the inventions described in said letters patent."

The conveyances mentioned have not been accepted, and in my judgment can not be accepted. They are, in all respects essential to this consideration, practically identical with a proposed assignment by Dr. Walter F. Rittman of your bureau, who attempted a like conveyance of his interest in a patent to what is commonly known as the Rittman process. Extended and careful consideration was then given to the question as to whether the Secretary of the Interior was in law authorized to accept Dr. Rittman's conveyance, and it was determined that he did not possess that power, in the absence of a statute authorizing him to exercise it.

That conclusion was announced in my letter of April 21, 1916, addressed to the chairman of the Committee on Patents of the United States Senate, Hon. Ollie M. James, with which I submitted a proposed joint resolution intended to confer the power mentioned. That resolution (S. J. Res. 125, 64th Congress) was introduced, favorably reported by the committee, and passed by the Senate on May 1, 1916 (53 Congressional Record, 8110). A similar resolution (H. J. Res. 209) was introduced and favorably reported by the Committee on Mines of the House of Representatives; but neither of these resolutions was enacted, and there is now no law which authorizes the acceptance of such conveyances.

I am still of opinion that the Secretary of the Interior has no power to bind either himself, officially, his successors or the Government by accepting such a conveyance in the absence of statutory authority to do so, and that by such an acceptance at this time I can do no more than possibly bind myself, personally, to execute the trust, in my individual capacity.

This conclusion seems to be in accord with the opinion rendered on May 26, 1917, in the matter of an attempted conveyance of certain lands by the town of Tishomingo, Okla., for use by the Chickasaw Indians for school purposes, which involved a kindred question; and it is supported by the announcements made in the cases of Inglis *v.* The Trustees of the Sailors' Snug Harbor (3 Pet., 99, 113), and Delaplaine et al. *v.* Lewis (19 Wis., 500, 503).

"A public officer may be a trustee, if he acts as an individual, and not in his official capacity" (28 Am. and Eng. Ency. of Law, 955).

You suggest that "should it transpire that for any reason the Secretary does not possess the power to enforce the terms of these licenses, the various licensees could then be informed of that fact, and that they occupy the position of users of a patent dedicated to the public."

This suggestion is met by the fact that the proposed conveyance to the Secretary of the Interior may not be construed into a dedication to the public, and by the further possible objection that the use proposed to be given will not, by the terms of that conveyance, vest in the public generally. In speaking of dedications it has been said "Not only must the use be intended for the whole public, but it must be a use which the whole public might possibly enjoy" (13 Cyc. 451).

Again, in my letter suggesting the enactment of the resolution mentioned above, it was further said:

" * * * Unless the authority asked for in this resolution is given to the Secretary of the Interior, he can not assent to the assignment of the Rittman patent rights, and these rights may revert to Dr. Rittman, or to the private parties or corporations to whom he may assign them."

For these reasons your recommendations can not be approved.

Yours, cordially,

FRANKLIN K. LANE.

COMMUNICATION FROM DR. S. W. STRATTON AND MR. H. D. HUBBARD, DIRECTOR AND SECRETARY, RESPECTIVELY, UNITED STATES BUREAU OF STANDARDS, SHOWING PATENT SITUATION IN THAT BUREAU.

BUREAU OF STANDARDS,
December 12, 1918.

Dr. STEWART, *Bureau of Mines:*

As per telephone request I append a list of some of the patents which have been taken out by members of the Bureau of Standards and dedicated to the Government. In some cases the patents have been also dedicated to the general public (I think in most cases). As the list is from memory, I am sure it is not complete and may, by inadvertency, include one or two cases where the final patent was not actually taken out.

H. D. HUBBARD, *Secretary.*

P. S.—The attached partial list does not include a large number of new devices and materials which have been developed by the bureau and made available for public use immediately. It probably would have been better in many cases to have had patents insuring the complete utilization by the Government free of charge. The chance is that a valid patent may be taken out after the bureau's discovery is announced in such a way that a full utilization of the Government's device may be hampered.

LIST OF PATENTS TAKEN OUT BY BUREAU MEMBERS.

Nutting.—Colorimeter for reproducing and measuring color. This instrument will analyze the color components of a given tint or shade and also indicate mixture of pure white necessary to bring the dominant hue to the color required.

Bates.—Polariscope—a new form especially adapted with device for adjusting the sensibility to secure the maximum accuracy with any degree of turbidity which is usable. The particular application is in polorimetric saccharimetry.

Kolster.—Decremeter—instrument for measuring the wave lengths of radio waves, an instrument of great importance in the research on and application of the principles of radio communication.

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[1] It was the President's executive order of Oct. 12, 1917, that first pointed the way to the very appropriate and natural solution of the problem as embodied in the bill at present under discussion. F. G. C.

Kolster.—Direction finder for radio communication. A very important instrument for indicating the actual direction from which radio signals are sent.

Weibel and Weaver.—Detector of explosive gases. This was developed to detect the presence of ultraminute quantities of gases in submarines. It is equally applicable in many other industrial cases, such as in mines, storage warehouses, and the like. A very simple and extremely useful device from the standpoint of safety of human life and for other purposes.

Gurevich and Woodward.—Low tin solders, a new type of solder in which cadmium is substituted for a large part of the tin used in the ordinary type of solders. The commercial value of this is very great and was developed primarily in order to conserve the tin supply required during the war. It will, however, be of permanent value.

Walker.—Antifreezing material for fire-extinguishing liquids. Of great economic value, since it avoids the use of chloroform in certain fire-extinguishing liuids and substitutes a more effective material at very much less cost.

Coblentz.—Radiophone, a signaling device for utilization of invisible thermal radiation by a combined photoelectric cell and oscillator. Also radiophone in combination with an interrupter, sectored disk, and a photosensitive material for similar purposes.

Bureau of Standards, *January 16, 1919.*

Dr. F. G. Cottrell,
Bureau of Mines, Washington, D. C.

My Dear Mr. Cottrell: In accordance with request received orally from you and from Mr. Stewart of your bureau, I inclose herewith a few notes covering specific instances of devices developed at this bureau.

In connection with the bill regarding the administration of patents, it might be added that especially in technical bureaus it is continually necessary to design new apparatus or devices. Sometimes the entire idea of the device is very new; in other cases it is a new type of instrument for doing a certain thing in a superior way; in still others the improvements are of a minor character. Very few scientific men have any time to extend the uses for such devices beyond the immediate object for which they were developed.

The inclosed rough notes are only intended as a few examples of cases such as would be found in any good scientific bureau.

I understand your idea is that Federal Trade Commission be authorized to accept and administer for the benefit of the public such patents. The policy in this bureau has been that patents developed in the regular line of duty of the employees engaged in a given line should be dedicated entirely to the public.

Respectfully,

S. W. Stratton, *Director.*

NOTES RE PATENTS IN BUREAU OF STANDARDS.

New scientific and technical publications by the bureau number approximately 100 a year, and probably an equal number appear in outside journals—certainly on the average each paper involves new and original appliances and devices. Furthermore, the ordinary work of developing the general equipment and the testing and research apparatus for the 80 technical sections of the bureau would involve new appliances, compounds, and processes which it would be difficult to estimate—certainly many hundreds. All of these are developed for specific bureau purposes, but in the nature of the case would be susceptible of universal application in the industries, technologies, and sciences, provided their industrial potential usefulness could be developed through some suitable official agency.

The bureau has a staff of about 600 technical experts. They are working on very moderate salaries, and it would seem that a very important service could be rendered to the industries if the fruits of their inventive activities could be made generally available to the industries. For example, a scientific expert in radiometry develops a heat-detecting or energy-measuring device which is susceptible to measuring the heat of a star. The principles involved and the end attained are applicable in industrial measurements of high temperatures, in laboratory instruments for phycological research, in studying the absorption of energy by vegetative and in many other useful ways. The radiometry expert at the bureau has not time in his regular work nor the means to reach the great variety of application of which his apparatus is susceptible, even if it were within his province to do so. This is an extreme type of a delicate apparatus of the most refined precision.

A more practical example might lie in such an instrument as the demulsometer. The reuse of lubricating oils for steam engines or turbines depends upon the readiness with which the oil can be separated from the steam which it absorbs in passing through the bearings. Until recently no form of instrument had been devised to test this property of lubricating oils from the standpoint of efficiency and economy. With a suitable demulsible oil, reuse of lubricating oils may be had for as long as five years—an extremely important element in economic lubrication. The instrument, devised by the lubrication expert at the bureau, Mr. Herschel, is now a part of the standard specifications. With suitable development, this instrument could have been made immediately of universal application wherever lubricating oils are in question. It may be added that this instrument was developed in and out of bureau hours, and was entirely without special recompense to the inventor.

The heat division of the bureau found it necessary to have a type of thermometer adapted to wide ranges of temperature and which would permit of very precise measurement and be, in addition, quite portable. A special type of resistance thermometer was therefore developed which fulfills these conditions. The importance of this invention slowly became known among certain manufacturers of scientific instruments. If a suitable agency had existed for facilitating and promoting the general application of this instrument wherever it would have served a useful purpose, the value in heat measurements could scarcely be overstated. This instrument also was invented without special recompense to the inventor. It must be remembered that heat measurements are a fundamental necessity in very many industrial processes.

The bureau developed a superstrong paper, made from manila rope material—the strongest ever produced—and the composition and the measured control of the manufacture were carefully recorded so that paper of superstrength could be duplicated in any paper mill. This paper was not patented nor was any published report made upon it, as it was developed for a specific use. A suitable agency might have brought this to the attention of every paper maker and user with great commercial and industrial gain.

A cotton fabric possessing the properties of linen was developed by the bureau for use in airplanes. If a suitable commercial agency had existed for studying the manifold industrial applications of such a fabric, a commercial gain to the industries would have resulted which can not easily be estimated, but which would doubtless be large.

The Bureau of Standards developed a system for preventing the damage to underground structures from the leakage currents of electricity. This damage is very large in some instances and the correction which can be applied wherever such conditions exist may be installed at a very moderate cost. The designers of the system have no patent protection for their system, but it is available for general use.

A mixture was developed in the cement laboratories which accelerates the hardening of the cement. The commercial value of this is considerable where rapid work on foundations is desirable to minimize expense.

LETTER OF DR. GEORGE OTIS SMITH, DIRECTOR, UNITED STATES GEOLOGICAL SURVEY, CONCERNING INVENTIONS AND PATENTS BY GEOLOGICAL SURVEY EMPLOYEES.

Geological Survey, *January 13, 1919.*

Dr. F. G. Cottrell,
Bureau of Mines.

My Dear Dr. Cottrell. In compliance with your request of December 18, I submit the following information concerning inventions and patents by Geological Survey employees:

The following processes were worked out by Mr. S. J. Kubel, in his own time and without expense to the Government and are in constant use in the engraving division of the Geological Survey:

Improved method for making projections on metal; an improved method for the accurate reproduction of projection bases of maps by mechanical means.

Improved printing bed and clamps, a new and improved method for rapidly securing and releasing metal printing plates in the printing press. The process is a saver of time and printing plates.

Copperplate punching machine, a device for the restoring of engraving surface on copperplates or other metal plates. The process in general use consisted of restoring the "gouged" portions of the plate by the use of hammer, punch, anvil, and calipers, the process requiring two or more workers. The improvement consists in a machine by which the engraver, unassisted, is enabled to get the desired results more rapidly and better.

The following processes, with specially designed apparatus, have been worked out and introduced in the United States Geological Survey by A. H. Linsenmeyer in his own time and without any expense to the Government, and are used in the reproduction of all maps produced in this office. They have not only been instrumental in reducing the cost, but have aided materially in bringing the work up to its present high standard.

Photo tracing process: A photo tracing process for reproducing facsimile copies of maps, etc., direct to copperplates for engraving, so that when finished and superimposed in one or more printings, would be in perfect registration.

This process has been successfully used since its introduction (June, 1906) on all copperplate engraving work produced in this office. While this process eliminated the old expensive hand-tracing method, it also replaced a patented process for which this office paid a royalty of $5,000 a year.

Celluloid transfer process: A transfer process whereby plane-table sheets, maps, etc., are reproduced by photography on thin sheets of celluloid and charged with graphite, so that when rubbed down on drawing paper, make perfect offsets for drafting purposes.

These celluloid prints are being continually used in this office in preparing and redrawing maps, and for inserting new sections of resurveys on old originals. This process has been in continuous use since 1906.

Photolithograph planographic zinc printing process: A photolithographing process for reproducing and printing maps to absolute scale, with better results and in one-half the time formerly required by the old photolitho transfer method. This process was the first planographic printing method used in the Government departments, and copied since by others, and has been used constantly since 1906, an average of 4,500 printing plates being made annually. It is at present the simplest, quickest, and cheapest method for printing limited editions. The practicability of this process was fully demonstrated during the war, when thousands of plates were made and printed of special and confidential work on demand.

Lithographic process: An improvement in a lithographic process by which great accuracy in the making of lithographic printing stones is acheved. This has been used to advantage in the engraving division of the Geological Survey, and was the result of studies made by Mr. P. H. Grombrecht in his own time at no cost to the Government.

Patents have been issued for the following inventions developed by members of the topographic branch, and no royalty is charged the Survey for use of these articles:

A tripod by Mr. Willard Johnson, an alidade by Maj. W. M. Beaman, and an Army sketching case by Lieut. Col. Glenn Smith.

The following inventive work has been done in the Division of Chemical and Physical Research:

Dr. F. W. Hillebrand was first to suggest the recovery of potassium by volatilization.

Dr. E. A. Schneider in work on the constitution of the micas showed that magnesium can be dissolved from mica (vermiculite). Possible source of magnesium chloride.

Mr. George Steiger in work on the constitution of the various silicates showed that potassium in leucite and other potassium minerals is liberated on heating with ammonium chloride. Possible source of potash.

Dr. R. C. Wells showed, in 1916, that the potassium in leucite rock can be rendered soluble by first heating the rock with alunite. He consulted several people, including some examiners in the Patent Office, about the advisability of taking out a patent, but the consensus of opinion seemed to be that the public interest would be better served by simply publishing the results in the usual way.

Dr. C. E. Van Orstrand designed an apparatus for measuring the depth of deep wells. It consists of a mounted disk of 2-foot circumference, provided with a revolution counter.

Many pieces of small apparatus have been designed in this division, such as apparatus for hardening steel rods, apparatus for determining the viscosity of solids, apparatus for comparing colors of liquids (colorimeter), apparatus for determining the porosity of gas and oil sands, automatic device for controlling temperature where two sources of currents are used, etc.

Yours, very truly,

George Otis Smith, *Director.*

LIST OF PATENTS IN THE DEPARTMENT OF AGRICULTURE AND TYPE OF PATENT REQUIRING ADMINISTRATION AS HERE CONTEMPLATED.

Applicant.	Bureau.	Invention.	Disposition of application.
A. S. Cushman	Public Roads	Process for extracting potash from feldspathic rocks.	Allowed.
Webber & Boykin	Plant Industry	Process for sizing or coating lint and fuzzy material on cotton and other seed.	Disallowed.
Chester E. Gray	Animal Industry	Apparatus for determining water in butter.	Allowed.
Brown & Duval	Plant Industry	Apparatus for rapid determination of the moisture content of certain grain and other similar substances.	Do.
A S. Cushman	Public Roads	Process for preventing the rusting of iron and steel.	Disallowed.
H. B. Shaw	Plant Industry	Method for separating weed seeds from other seeds.	Do.
A. W. Morrill	Entomology	Improvement in fumigating tents and process of using same.	Allowed.
W. E. Hinds	do	Cultivator for destroying cotton-boll weevils.	Do.
J. L. Merrill	Plant Industry	Process for making paper pulp from flax straw, flax tow, and other ligneous material.	Do.
H. C. Pierce	Chemistry	Poultry-picking frames	Do.
Wm. H. Mast	Forest Service	Planting board	Do.
E. G. Boerner	Plant Industry	Device for sampling, mixing, and blending seed, flour, meal, and other like material.	Do.
H. C. Gore and C. O. Townsend.	Chemistry	Process for making sirup from sugar beets.	Do.
Wm. H. Waggaman	Soils	Process for manufacturing sulphuric acid.	Do.
S. C. Hood	Plant Industry	Rotary grating machine	Do.
F. C. Weber and F. M. Allen.	Chemistry	Fish positioning machine	Do.
O. R. Rogers	Weather Bureau	Apparatus for recording duration of rainfall.	Do.
F. F. Chase	Plant Industry	Gravity fruit separator	Do.
M. G. Donk	Chemistry	Process for producing high-grade rosin from low-grade rosin.	Do.
M. Dorset and H. J. Shore.	Animal Industry	Process for the manufacture of concentrated hog-cholera antitoxin.	Pending in interference.
H. H. Bunzel	Plant Industry	Thermostat	Disallowed.
H. C. Gore	Chemistry	Process for preserving fruit juices	Allowed.
H. E. Patten	do	Apparatus for impregnating liquids with gas.	Do.
T. B. Lear	Animal Industry	Stamping tool or punch	Do.
J. F. Barghausen	Plant Industry	Interlocking device	Do.
F. C. Weber and F. M. Allen.	Chemistry	Machine for cutting and eviscerating fish.	Do.
E. B. McCormick	Public Roads and Rural Engineering.	Torsion dynamometer	Do.
George A. Olson		Process for drying gluten	Do.
L. R. Ingersoll	Forest Service	Apparatus for measuring the gloss of nonmetallic surfaces.	Do.
H. D. Tiemann	do	Dry kilns for drying lumber and other moisture-bearing substances.	Do.
Wm. R. Ross, A. R. Merz, and J. N. Carothers.	Soils	Concentrated fertilizers	Do.
C. S. Reeves, Provost Hubbard, R. H. Lewis.	Public Roads and Rural Engineering.	Process for preparing waterproof paving material.	Pending in interference.
P. A. Yoder	Plant Industry	Sirup evaporator	Allowed.
John H. Clack	Forest Service	Pack frame	Do.
R. B. Adams	do	Portable telephone	Pending.
J. L. Merrill	Markets	Method for making flax tow	Allowed.
P. J. Fox	Soils	Process for extracting potash and alumina from alunite.	Do.
J. F. Barghausen	Plant Industry	Machine for gathering crimson clover	Do.
O. Kress and S. D. Wells	Forest Service	Process of cooking wood pulp	Do.
Wm. F. Oglesby		Device for clipping olive and other fruit pits.	Do.

LIST OF PATENTS IN THE DEPARTMENT OF AGRICULTURE AND TYPE OF PATENT REQUIRING ADMINISTRATION AS HERE CONTEMPLATED—continued.

Applicant.	Bureau.	Invention.	Disposition of application.
Kan Smith	Forest Service	Compass altimeter	Allowed.
Wm. R. Ross, A. R. Merz, and J. N. Carothers.	Soils	Process for the manufacture of a concentrated fertilizer.	Do.
H. D. Gibbs and G. A. Geiger.	Chemistry	Process of manufacturing chlorine compounds.	Do.
Do	do	Apparatus for making chlorine compounds.	Disallowed.
A. R. Merz, Wm. R. Ross, and J. N. Carothers.	Soils	Method for recovery of phosphorous fumes evolved in the volatilization method of treating phosphate rock.	Allowed.
C. F. Payne	Animal industry	Combination marking pot and stencil-brush inker.	Do.
F. H. Colburn	Forest Service	Improvement in relief alidades	Do.
Wm. B. Osborne, jr	do	Device for locating the range of distant objects.	Do.
J. E. Imrie	do	Dry kilns	Disallowed.
A. R. Merz and Wm. R. Ross.	Soils	Process for the extraction of potash and alumina from alunite.	Pending.
H. D. Gibbs	Chemistry	Oxidizing the side chains of aromatic hydrocarbons.	Allowed.
R. E. Prince and O. Kress.	Forest Service	Process for fireproofing paper	Pending.
Do	do	do	Do.
M. Dorset and R. R. Henley.	Animal Industry	Process for separating serum from the corpuscles of mammalian blood.	Allowed.
R. E. Prince	Forest Service	Process for fireproofing fibrous material.	Do.
R. C. Palmer	do	Process of destructively distilling wood	Do.
Do	do	Method of destructively distilling wood	Do.
J. N. Carothers and Wm. R. Ross.	Soils	Smelting of phosphate rock	Pending.
L. W. Page	Public Roads and Rural Engineering.	Concrete	Do.
H. D. Gibbs and Courtney Conover.	Chemistry	Process for the manufacture of phthalic anhydride, etc.	Do.
E. B. McCormick	Public Roads and Rural Engineering.	Recorders	Allowed.
C. H. Teesdale and R. E. Prince.	Forest Service	Process of fireproofing wood	Do.
Wm. V. Cruess		Process for pickling olives	Disallowed.
C. H. Teesdale	Forest Service	Process for treating wood	Allowed.
N. DeW. Betts and H. D. Tiemann.	do	Dry kilns	Do.
E. J. Hoff	Public Roads and Rural Engineering.	Automatic weir for regulating the flow of water.	Do.
V. M. Cone	do	Venturi measuring flumes	Pending.
J. F. Collins	Plant Industry	Method of filling cavities made by excavating the decayed or injured spots in a living tree.	Allowed.
F. W. Stanley	Public Roads and Rural Engineering.	Automatic irrigation nozzles	Do.
H. D. Tiemann	Forest Service	Dry kilns	Do.
A. W. Schorger	do	Apparatus for straining crude ooleresin.	Disallowed.
J. F. Collins	Plant Industry	Method of treating decayed spots in living trees.	Allowed.
E. Johnson and J. Clay Woodson.	Public Roads and Rural Engineering.	Fire extinguisher	Pending.
Wm. H. Waggaman, H. Bryan, C. B. Wagner.	Soils	Apparatus for the manufacture of phosphoric acid and compounds of the same.	Allowed.
Otto Kress and H. F. Weiss.	Forest Service	Process for producing paper pulp board containing bark.	Disallowed.
H. D. Gibbs and G. A. Geiger.	Chemistry	Process for manufacturing side chain chlorine derivatives of toluol.	Pending.
C. H. Teesdale	Forest Service	Process for rendering lumber resistant to sap stain.	Allowed.
M. N. Straughn	Chemistry	Process for the preservation of fruit juices.	Pending in interference.
S. Ozaki		Process for preparing a rice food product.	Disallowed.
A. R. Merz and Wm. R. Ross.	Soils	Process for the simultaneous production of volatile acids and phosphate salts.	Pending.
J. E. Imrie	Forest Service	Improvement in shrinkage take-up frames for edge stacking lumber.	Disallowed.
H. D. Gibbs and C. Conover.	Chemistry	Process for the manufacture of phthalic anhydride, etc.	Pending.
Do	do	Process for the manufacture of anthraquinone.	Do.
Do	do	do	Do.

LIST OF PATENTS IN THE DEPARTMENT OF AGRICULTURE AND TYPE OF PATENT REQUIRING ADMINISTRATION AS HERE CONTEMPLATED—continued.

Applicant.	Bureau.	Invention.	Disposition of application.
W. G. Taggard		Method of manufacturing decolorized carbon.	Pending in interference.
Wm. W. Skinner and W. F. Baughman.	Chemistry	Process of manufacturing salt from its admixtures with impurities in crude brine.	Allowed.
Robert F. Gardiner	Soils	Process of making a mixed phosphatic and nitrogenous fertilizer.	Do.
Frederick T. Bioletti		Process of canning or bottling ripe olives or other pickles.	Pending in interference.
R. F. Gardiner	Soils	Process of making a mixed potash, nitrogenous and phosphatic fertilizer.	Allowed.
Do	do	Process for producing a mixed potash, etc., and nitrogen fertilizer.	Do.
J. P. Schroeder	do	Process of treating peat and muck for the preparation of fertilizer.	Do.
E. Johnson	Public Roads and Rural Engineering.	Fire extinguisher spray nozzles	Do.
Wm. V. Cruess		Process of pickling olives	Do.
Wm. H. Wagaman, C. R. Wagner and H. Bryan.	Soils	Process for the manufacture of phosphorus, phosphoric acid and compounds of the same.	Do.
A. R. Merz	do	Process for rendering water-soluble the potash in cement-mill dust.	Pending.
H. F. Lewis and H. D. Gibbs.	Chemistry	Process for the manufacture of phenanthraquinone.	Allowed.
W. W. Garner and E. G. Reinhard.	Plant Industry	Process of preventing the development of black rot and other fungous and bacterial diseases in leaf tobacco.	Do.
J. A. Ambler and H. D. Gibbs.	Chemistry	Process for the manufacture of aromatic sulphonic acids.	Pending.
William F. Conway	Animal Industry	Device for stamping or marking meats.	Allowed.
F. K. Cameron and Richard B. Moore.	Soils	Process for extracting iodine, etc., from the ash of seaweeds and other marine forms of algæ.	Do.
F. K. Cameron and W. H. Waggaman.	do	Process for extracting potassium sulphate, etc., from mineral alunite.	Disallowed.
R. B. Moore	do	Process of drying seaweeds or other marine forms of algæ.	Do.
H. H. Bunzel	Plant Industry	Method for determining the oxidase content of plant juices.	Allowed.
Theo. H. Scheffer	Biological Survey	Mole trap	Do.
C. J. Bingham	Forest Service	Folding plow	Do.
H. H. Bunzel	Plant Industry	Oxidase apparatus	Do.
Do	do	Titration apparatus	Do.
R. H. Shaw	Animal Industry	Method of determining the content of butter fat in butter.	Do.
Do	do	Separatory funnels	Do.
A. G. McAdie	Weather Bureau	Plant protector	Do.
R. M. Chapin	Animal Industry	Process for preparation of concentrated animal dip.	Do.
D. W. Adams	Forest Service	Turpentine hack	Do.
R. G. Merritt	do	Hypsometer	Disallowed.
H. C. Gore	Chemistry	Process for making sirup from cider and other fruit juices.	Allowed.
J. M. Nelson, jr	Forest Service	Improvement in process for treatment of timber with liquid preservatives.	Do.
A. G. McAdie	Weather Bureau	Method of assisting forecasters in preparation of weather maps, charts, bulletins, etc.	Do.
J. W. T. Duval	Plant Industry	Improvement in laboratory balances	Disallowed.
A. F. Martins	Animal Industry	Device for stamping meats	Do.
Lore A. Rogers	do	Device for spraying paraffin on butter tubs.	Allowed.
Milo M. Hastings	do	Apparatus for measuring humidity in or for determining evaporating power of air.	Do.
Q. Q. Bradford	Experiment stations	Knife for tapping rubber trees	Do.
F. G. Plummer	Forest Service	Improvement in hypsometers	Do.
D. M. Rogers	Entomology	Insect-destroying bomb	Do.
Harry D. Tiemann	Forest Service	Process of rapidly drying timber and other moisture-bearing substances.	Do.
L. R. Maynard and K. E. Parks.	Animal Industry	Milk cans or containers	Disallowed.
A. G. McAdie	Weather Bureau	Plant protector	Allowed.
G. F. Mitchell	Plant Industry	Shrub and plant trimming machine	Do.
C. S. Smith	Forest Service	Improvement in wood impregnation	Do.
Harry D. Tiemann	do	Process for regulating and maintaining humidity.	Do.

LIST OF PATENTS IN THE DEPARTMENT OF AGRICULTURE AND TYPE OF PATENT REQUIRING ADMINISTRATION AS HERE CONTEMPLATED—continued.

Applicant.	Bureau.	Invention.	Disposition of application.
A. G. McAdie	Weather Bureau	Combination thermograph and hydrograph.	Allowed.
L. W. Page	Public Roads	Process for mixing and preparing hydraulic cement concrete.	Do.
H. D. Tiemann	Forest Service	Apparatus and process for controlling humidity of gases in drying operations.	Do.
Wm. Brough	Animal Industry	Device for tatooing animals	Do.
Wm. T. Conway	do	Device for stamping or marking of meats.	Do.
A. G. McAdie	Weather Bureau	Plant protector	Do.
H. D. Tiemann	Forest Service	Process of drying timber and other moisture-bearing substances.	Do.
A. G. McAdie	Weather Bureau	Barometer dial converter	Disallowed.
F. M. Allen	Chemistry	Machine for testing life of typewriter ribbons.	Allowed.
H. D. Tiemann	Forest Service	Process of rapidly drying timber and other moisture-bearing substances.	Do.
C. H. Hoyt	Public Roads	Method of constructing macadam roads	Disallowed.
Do	do	Prepared filler and binder for resurfacing parkways, etc.	Do.
H. L. Walters and C. E. Goodrich.	Chemistry	Fat extraction apparatus	Allowed.
M. E. Pennington and H. C. Pierce.	do	Poultry-cooling rack	Do.
H. C. Gore	do	Process of treating Japanese persimmons, etc.	Do.
A. G. McAdie	Weather Bureau	Fruit protector	Do.
H. J. Tompkins	Forest Service	Device for planting seedlings	Do.
C. F. Sammet and J. L. Merrill.	Chemistry	Process for treating fiber-yielding materials.	Do.
R. F. Bacon and H. C. Gore.	do	Process for treating fruit juices	Disallowed.
S. D. Wells	Forest Service	Process of manufacturing paper pulp	Allowed.
H. D. Gibbs and C. Conover.	Chemistry	Process for the manufacture of phthalic anhydride, etc.	Do.
J. A. Ambler, R. Hellbach and H. D. Gibbs.	do	Apparatus for the manufacture of sulphonic acids of the aromatic carbons.	Pending.
H. F. Lewis and H. D. Gibbs.	do	Process for the purification of commercial anthraquinone.	Allowed.
J. A. Ambler and H. D. Gibbs.	do	Process for the manufacture of napthalene sulphonic acids.	Pending.
Do	do	Process for the manufacture of benzene sulphonic acids.	Do.
Do	do	Process for the manufacture of toluene sulphonic acids.	Allowed.
S. B. Henning	Forest Service	Process for manufacture of glue	Case sent to War Department.
G. A. Russell	Plant Industry	Tree-trimming and harvesting machines.	Pending.
M. Dorset and R. Henley.	Animal Industry	Process for the separation of blood serum.	Allowed.
G. R. Goergens	Publications	Process for a new and useful improvement in motion-picture cameras.	Pending.
A. O. Lundel	Animal Industry	Meat handling and inspection machine.	Pending in interference.
J. A. Newlin, L. J. Markwardt, and A. Elmendorf.	Forest Service	Airplane struts	Case sent to War Department.
J. K. Haywood	Chemistry	Improvement in processes for manufacturing calcium arsenate.	Allowed.
J. W. McLane	Plant Industry	Process for preparing dried sweet corn.	Pending.
C. Conover and H. D. Gibbs.	Chemistry	Process for the purification of crude anhydride.	Do.
E. Johnson	Public Roads and Rural Engineering.	Improvements in powder-dusting machines.	Allowed.
J. J. Laing and C. W. Boling.	Forest Service	Nonconducting and waterproof composition.	Pending.
Do	do	Method of manufacturing nonconducting and waterproof compounds.	Do.
E. B. La Forge	Chemistry	Manufacture of a product suitable for use as a feed for stock.	Do.
Do	do	Process of manufacturing glucose	Do.
Do	do	Process of manufacturing gulonic lactone.	Do.
Do	do	New leavening agent	Do.
Do	do	Process of manufacturing an adhesive material.	Do.
D. S. Olson	Forest Service	Sand-spreading machine	Do.

LIST OF PATENTS IN THE DEPARTMENT OF AGRICULTURE AND TYPE OF PATENT REQUIRING ADMINISTRATION AS HERE CONTEMPLATED—continued.

Applicant.	Bureau.	Invention.	Disposition of application.
Sidney D. Wells	Forest Service	Manufacture of paper pulp	Allowed.
E. L. Sechrist	Entomology	Septum for honeycomb	Do.
M. Dorset and R. R. Henley.	Animal Industry	Process for refining defibrinated blood antitoxin.	Do.
C. S. Hudson	Chemistry	Process of manufacturing glucose	Pending.
Do	do	Process of manufacturing a leavening agent.	Do.
E. H. Siegler	Entomology	Improved insect trap	Do.
E. F. Gardiner	Soils	Process for the production of an available phosphoric anhydride and potash fertilizer.	Allowed.
M. N. Straughn	Chemistry	Process for the manufacture of preserves and jams.	Pending in interference.
J. N. Carothers and W. H. Ross.	Soils	Direct preparation of crystallized phosphoric acid.	Allowed.
G. R. Goergens	Publications	Panoramic camera attachment	Pending.
Boahrd & Gibbs	Chemistry	Manufacture of hydrochloric acid	Do.
F. W. Zerban		Decolorizing carbon	Do.
R. R. Gardiner	Soils	Manufacture of nitric and sulphuric acids by electrolysis.	Do.
Longley & Yoder	Plant Industry	Cane-stripping comb	Do.
Gibbs, Ambler and Luhs.	Chemistry	Manufacture of cymene sulphonic acids.	Do.

Total of 116 allowed, 44 pending: 2 sent to War Department.

LICENSES ISSUED UNDER PATENTS HELD BY THE DEPARTMENT OF THE INTERIOR.

BUREAU OF MINES.

Memorandum for Dr. Cottrell regarding licenses issued to use inventions of employees of the Bureau of Mines:

Twenty-five licenses have been issued for the use of the Rittman process in producing gasoline.

Seven licenses have been issued for the use of the Rittman process in producing benzene-toluene.

The foregoing does not mean that 32 separate licenses have been issued, as some of the earlier Rittman licenses were made to cover the use of the process for both gasoline and benzene-toluene; also some were for "gasoline and other distillates," "petroleum products," etc.

One license has been issued to make and use the Gillett furnace.

Two licenses have been issued to use the Gillett furnace.

Two licenses to make and sell the furnace have been sent out. These licenses have not been returned for execution by the Secretary of the Interior.

One license to make and use the furnace has been sent out and not returned for execution.

Four licenses to use the furnace have not been returned for execution.

One license has been issued to manufacture the Gibbs breathing apparatus.

An application for a patent to cover a process for protecting oil wells from damage by subterranean water has been filed, and the rights thereunder assigned to the Secretary.

An application for a patent to cover a process for separating niter cake has been filed, and it is understood that an assignment of the rights within the United States to this invention will be made shortly to the Secretary of the Interior.

Work is now being carried on covering three other subjects in connection with which it is expected that application for patents will be made shortly.

Cordially, yours,

PAUL S. BLACK, *Law Examiner.*

(The committee thereupon adjourned, at 12 noon, subject to the call of the chairman.)

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MSH # 21936

END OF
TITLE